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Hunterian Lecture

ON THE

EXPERIMENTAL PRINCIPLES OF THE OPERATIVE TREATMENT OF FRACTURES AND THEIR CLINICAL APPLICATION.

Delivered before the Royal College of Surgeons of England on Feb. 6th, 1914,

BY ERNEST W. HEY GROVES, M.S. LOND., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF THE COLLEGE; SURGEON TO THE BRISTOL GENERAL HOSPITAL.

MR. PRESIDENT, LADIES AND GENTLEMEN,—It is first my pleasant duty to thank you, Sir, and the Council of the College for the high honour you have done me in allowing me for one proud moment to occupy the chair of the great Hunter, and in the second place to offer my sincere gratitude to those many surgeons from this country and abroad who have, in so generously responding to my request, furnished the material for the exhibition which accompanies this lecture, and to the Museum Committee for allowing me to arrange the exhibits in the atrium of the museum. The problems connected with the treatment of broken bones are very many and complex, and recent surgical teaching has tended to multiply and complicate these problems rather than to solve them.

THE PROBLEMS IN QUESTION.

A quarter of a century ago the matter was comparatively simple. The broken bone had to be "set"—i.e., its jagged ends replaced in apposition; and when this had been done the limb was to be placed on a splint for a period varying from a few weeks to three months; then the patient was dismissed, sometimes with a good limb and sometimes with a maimed one. Vicious union, delayed union, and non-union were processes which might occur to mar the result, but no one thought of blaming the treatment for this, provided that the orthodox "setting and splinting" had been carried out. It was just bad luck, and there was nothing more to be said.

Now all this sweet simplicity has changed. Workmen's Compensation Acts have directed attention to the terrible financial loss produced by maimed limbs, and have forced us to ask, Is this preventable, and if so, why not prevented?

To three great men belongs the credit of awakening the profession to a knowledge of the truth about fractures, and each has established a new method of dealing with them. Two of these, alas, have died within the last twelve months, but happily one remains with us to-day as a dauntless pioneer in this and other fields of surgery.

Bardenheuer has shown that infinitely better results can be obtained by steady traction than by "setting and splinting." Lucas-Championnière has demonstrated the almost magical capacity of a certain kind of massage to abolish pain and reduce displacement, and he has proved beyond contention the evil effects of prolonged immobilisation. Lane has contended that broken bones must be fixed by operation, or else they will remain displaced and the function of the limb will be damaged. And, above all, the X rays have come to demolish all our former optimism about "setting" broken bones, so that we now know that, except in partial and subperiosteal fractures, the accurate setting of a bone in a position in which it will remain is a myth, and therefore the whole foundation of the old treatment is destroyed.

We have now to choose between immobilisation with disregard to all but gross deformity, continuous extension, massage with mobilisation, and open operation. We have to decide to what extent these represent rival systems or merely cöoperative principles which must be applied according to circumstances.

Whilst leaders like Bardenheuer, Lucas-Championnière, Lane, and Lambotte have each developed their own particular methods to a great degree of perfection, the profession as a whole has maintained a conservative and sceptical attitude, and continues for the most part to trust to splints, or plaster, and to luck in the treatment of fractures. The value of extension and of massage has been widely acknowledged, but the time and trouble necessary for the mastery of the methods and their execution have prevented their being carried out with anything like the thoroughness of their original advocates.

But it is with regard to the scope, methods, and results of the operative treatment that there has arisen the greatest difference of opinion. Skiagrams are produced to show the perfect results of operations, others to show the perfect results of other methods, and, again, others to show the imperfections of this method or that. The clinical evidence is so confusing because it deals with fractures of all kinds and all ages, with surgeons who may or may not have special interest in the subject, and with methods of every possible variety. The very term "operative treatment" is so vague that it may mean anything, from the mere twisting of a bit of wire round the bones by one who has never done such a thing before to the elaborate application of a carefully planned apparatus by an experienced master of craft.

It is rather remarkable that though there have been many experimental researches on the subject of fractures and their healing, almost all of these have had relation to the origin and formation of callus; and none, as far as I know, have been carried out to test the principles of the operative treatment. Experiments on animals cannot tell us much about non-operative treatment of fractures, because such treatment leads to so much deformity that in veterinary practice an animal with a bad fracture is not treated, but killed. But they can give us information about the operative fixation of bones, which is to be obtained from no other source, and as a side issue this study will provide, for any who care to take it up, a perfectly efficient method of treating the broken bones of animals, so as to save for usefulness and breeding many a valuable horse or dog.

Quite apart from experiments on living animals for the study of vital repair and the restoration of function, there is another experimental method for the study of the technique and the acquirement of dexterity in the various methods—viz., the operations upon the dead body. Operative repair of fractures is a matter of manual practice and dexterity. It is in one sense the work of a carpenter, which can never be properly carried out without the education and training of a carpenter. If everyone who practised these operations had a preliminary six months in a carpenter's shop, and then performed on a sufficient number of broken

bones on dead people to ensure technical skill, we should see and hear far less than we now do of operative failures.

For the past three years I have been pursuing these two lines of investigation, mending fractures which I have made in the bones of living animals and dead men. For my present purpose I propose to show typical examples of the experimental work, so as to give the basis of the various principles in the operative treatment of fractures, referring those interested in the matter, to a recent publication[1] for a full account of my work on animals.

RESULTS OF OPERATIVE FIXATION IN ANIMALS.

Most of my animal experiments have been on cats, a few only being on rabbits, using chiefly the tibia and sometimes the femur. No attempt at external splinting was made, the animals being allowed to use the limb according to their own instinct.

On Insecure Fixation.

One of the greatest surprises that my experiments afforded me was the demonstration of what a relatively strong fixation was necessary to keep the ends of a broken bone in good apposition until they had firmly grown together. The tibia of a cat is about 1/4 inch thick, and its medullary cavity measures about 1/8 inch. If this bone is divided and then a solid bone peg inserted into the marrow cavity, although this is one-half the original thickness of the bone, it was invariably broken, and the same thing occurred in the femur, where the peg used was 5/32 inch thick. This fracture of the peg did not occur at once, the muscles remaining somewhat inert for a few days after the traumatism of the operation, but at about 5 to 7 days after, when the animal first began to use its limb. The fixation must leave the bone as strong as it was before the fracture, or there will be a risk of its speedy breakage.

The use of short plates fixed by small screws, which hold only by their bite of the dense bone, gives similar results. In such cases I have never seen a fracture of the plate, but the screws become loosened from one or both ends of the bone. (Fig. 1.) Bone is a living tissue, and as such it softens and yields before local pressure. The words of Sir William Macewen are pertinent in this connexion. He says: "A pin driven into the diaphysis, so that it is firmly caught, will in the course of a few days become loose, owing to the softening which the mechanical stimulation has set up in its periphery. The greater the pressure the greater the area of softening."[2] Obviously the same thing applies to tightly driven screws.

This fact is of great importance when we have regard to the prevalence of screwing methods in modern bone surgery. A screw which presses upon the bone will rapidly loosen its hold; the rapidity with which it becomes loose will be in direct proportion to the pressure which is exerted upon it. This loosening of screws which fix plates to bones may be minimised in two ways, either by using a large number of screws, so that the pressure upon any one is small, or by keeping the limb rigidly splinted so that muscular traction is reduced to a minimum. By either of these devices the plate may hold in place until vital union has occurred, but it is clear that such a result will be rather a happy accident than a certain effect.

[1] British Journal of Surgery, vol. i., No. 3, p. 438.
[2] Growth of Bone, p. 21.

The objection may be raised against my experimental methods that the plates were so short that they cannot be compared with those used in human surgery. But in the first place the question of size is a relative one. The plates were about one-fifth the length of the bone, which would be equivalent to a 3-inch plate used for the human tibia or femur. The screws were one-eighth of the thickness of the shaft, which would give screws 1/8 or 3/16 inch thick for the human leg bones. And, secondly, the inefficient principle of the method, depending as it does upon the fact that every tightly driven screw becomes loose by reason of its own pressure upon the bone, will not be altered by any increase in the size or number of screws, though by this means its ill effects may be averted.

Whatever may be the cause of the insecurity of fixation, the results are extremely bad—i.e., every possible variety of mal-union or non-union, with the frequent addition of septic complications. An operative fixation of a fracture, which gives way early, leaves the bone in a very much worse condition than it was before the operation. And this for at least four reasons: (1) that in the course of the operation the periosteum and muscular sheath of the bone have been separated from it to some extent, and therefore the preventive of displacement is lost; (2) there has been some interference with the minute vascular supply of the bone ends; (3) there is a loose foreign body left in the tissues; and (4) there is an external wound through which sepsis is very likely to enter.

On Incomplete Fixation.

There are some methods which are perfectly efficient as regards the strength of the union they produce, but they allow from the outset some slight movement between the bone ends.

The most important among these is the application of encircling wire under certain conditions. I have not studied this systematically by experiment, because the use of wire having been so largely abandoned in human surgery there did not seem to be much practical use in the research. But I have often used it in addition to such things as gelatin or decalcified pegs. These pegs are very quickly broken or absorbed, and the obliquely divided bone, left surrounded by several turns of wire in very much the same way as fractures used to be treated by "wiring." Such a union is always bad. The bones cannot slip altogether apart, but the divided ends are constantly chafing against the wire. This chafing occurs just at the very place from which the principal agent of repair, the external callus, originates. The early stage of callus consists of soft granulation tissue, and this will be destroyed by the rubbing wire just as fast as it is formed. Hence I always found in my experiments that the most certain means of preventing or delaying bone union will be by the loose encirclement of the broken ends by wire.

Another method which allows slight mobility of the fragments without displacement is that of intramedullary pegs. These can only be slipped into the bone ends if they fit rather loosely. The result on the healing of the bone in this case is the tendency to the production of some amount of callus excess. This will occur especially in the case of single bones, such as the femur or humerus, where the peg does nothing to prevent rotation of the fragments. (Fig. 2.) I have never seen any harm as regards the function of the limb arise from this

callus excess either in animals or human beings, but it is not a desirable condition, especially as one has no means of controlling it. But, nevertheless, the uniformly good results, the facility of its application, and the small incision through which it can be applied, make the method one of great value, which I shall speak of again when dealing with human fractures.

On Mechanically Efficient Fixation.

In the course of upwards of 100 experiments upon animals the fact which has impressed itself upon my mind more than anything else is the importance of mechanical efficiency of fixation. A broken bone is a part of an ever-moving piece of machinery, of which the surrounding muscles form an integral portion. Even if voluntary movement be abolished by external splints there is always the strong tonic contraction of the muscles to be reckoned with.

It is like mending the broken shaft of the propeller of a steamer. For a short time the engine is at rest, but the broken shaft in that time must be so fixed together as to withstand all the throbbing of the engine and the beating of the seas until the ship can reach her harbour. So with an operation on a broken bone under the anæsthetic the ever-pulling muscles are quiet, and during that moment, if the surgeon is to do any good, he must so fix together the bone that it can withstand any strain likely to be put upon it until natural repair has taken place. Of course, this analogy must not be pushed too far, for the bone will heal if left to nature, while the steam engine will not. But nature has her own method, and if the bone is completely broken the ends become displaced and the limb shortened, so that the muscles are thrown out of gear, and the condition of stable equilibrium or rest demanded for reparative processes is thus attained, but often at the ultimate expense of the length and form of the limb.

If a long plate be applied to a bone, and fixed by pins or screws which go through its whole thickness and are not held by a mere frictional grip, but by a relatively broad flange or nut, then there is provided a mechanically efficient union, and such union has in my experiments given uniformly good results. (Fig 3.) Generally I employed what are technically termed split or cotter pins, fixing a steel plate about one-third of the length of the bone. I have also used double plates, on opposite sides of the bone, joined through its thickness either by cotter pins or by bolts and nuts. Ten such experiments without a single failure have convinced me that the principle is correct, and it only remains to master the technical difficulties of its application.

Firm, strong bone union occurs without any callus excess, showing that absolute fixation of the fragments is no hindrance to vital repair. The animals use the leg freely from a week to a fortnight after the operation, showing that no splints and no after-treatment are necessary to secure a functionally perfect result.

The Problem of Sepsis.

From the earliest days of the operative treatment of fractures the problem of sepsis has largely dominated the question. At first it seemed to be flying in the face of Providence to convert a closed into an open fracture. And then it became a common experience, and possibly is so to the present day, for the post-operative course to be complicated by the occurrence of a septic sinus, which only closed when the metal substances used for the operation had been removed. Hence the dictum that asepsis is the first and chief necessity for fracture operations. That asepsis is the first necessity no one would deny, but asepsis during the operation by no means ensures that no septic complications shall afterwards arise.

First let me give my experimental evidence of this before I attempt to explain it. In a long series of cases where the bones were not firmly or properly fixed (short plates and screws or pegs which broke or were absorbed) there was a very high proportion of sepsis, amounting to about 60 per cent. In an equally long series where the bones were firmly united there was not a single septic case.

Now such a result in the hands of the same operator, and under the same conditions, must prove that there is something else than a fault of aseptic operating. And this other or post-operative factor is not far to seek. When the bone is united in such a way that disunion occurs, the fragments moved by the muscles cause a great outpouring of lymph, and the foreign bodies lying loose in the tissues produce the same result. This fluid quickly oozes out from the recent wound, and along the sinus thus formed, sepsis quickly finds its way from the skin to the deep tissues, where there is every encouragement for its development. Exactly the same thing happens in human surgery. A wobbly union of the fragments or loose screws, especially if these lie just beneath the skin, cause a discharge, which becomes septic. This is one or two weeks after the operation, and it is the result and not the cause of the faulty fixation.

The Question of Delayed Union.

This is another point of great importance. Is there any evidence that operative treatment *per se* causes this? Experimentally as well as clinically I think there is. Clearly one can only deal with this point in cases uncomplicated by any other untoward event. In the two methods which have given uniformly good anatomical and functional results—viz., those with the long plates and transfixing pins and the steel intramedullary pegs—I have had one instance of delayed union in each series.

I do not think it is due to mere immobility, otherwise it would occur as the rule, and not as the exception, when the bones are rigidly fixed. It is caused, I think, by an interference with the blood-supply of the bone ends by the operative manipulations. This causes the cut ends of the bone to remain inert for a time, and unable to throw out any reparative callus. But in both cases where I have observed it, the delayed union did not cause any evidence of its presence—that is to say, the function of the limb was perfect, and I have no doubt that if the animal had been kept alive long enough (both were killed at a period of six weeks after the operation) union would have eventually taken place.

We must admit, I think, that delayed union is a possible result of operative fixation, but this will leave little or no ill-effect if the fixation has been so efficient as to last for an indefinite time.

On Indirect Methods of Fixation.

It is possible to hold firmly the ends of a broken bone in good position without directly interfering with the site of a fracture. I did this by transfixing the bone as far as possible from its point of division and connecting the transfixing rods by outside metal bars. Such a method accurately and certainly carries out what many of the more precise of the

non-operative methods aim at—that is to say, there is a correct alignment of the bones, the muscular forces pulling upon the fracture are counteracted, but the broken ends are not rigidly fixed, and there is movement permitted in the joints above and below.

There can be no doubt that the apparatus which I used gave as perfect results as any of the direct operative methods. (Fig. 4.) The anatomical and functional results were uniformly good, union of the bone was rapid and never accompanied by any delay or callus excess, which sometimes goes with direct operative attack. It is a method by which can be attained a uniformly accurate result at any given period, and it affords a good series of specimens showing the stages in callus formation and osseous repair. Further, the method is one which with proper apparatus is easily and quickly applied, being a trivial matter which can be done under short gas anæsthesia.

It is a fair inference from these experiments that methods of indirect fracture fixation form the ideal treatment of fractures, provided that in any case to which they are applied the bones are accurately restored to position, and there maintained for a sufficient time for union to take place. Unfortunately, these conditions are often not fulfilled, and the method quite fails then to produce ideal results. Either the bone ends are not properly readjusted and there is mal-union, or mobility is permitted with a consequent callus excess.

The Treatment of Comminuted and of Open Fractures.

When there is much fragmentation of the bone at the site of injury, or when there is an open wound communicating with it, direct operative fixation may be correspondingly difficult or dangerous. In such cases, the method of indirect fixation is particularly indicated, and I have found that when the shaft of the bone has been crushed into small fragments for a considerable extent (about one-fifth of its length) rapid and solid union takes place with good anatomical and functional result, but with some tendency to callus excess. (Fig. 5.)

Living Bone as the Origin of Callus.

The subject which has for the most part absorbed

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

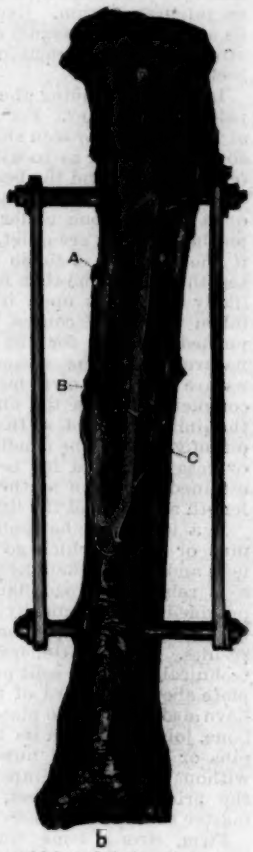


FIG. 1.—Rabbit's femur, 21 days after plating. Screws have come out from the lower fragment. Malunion with lateral displacement.
FIG. 2.—Cat's femur, 42 days after operation by a steel intramedullary peg. Firm union with some excess of external callus which is still partly cartilaginous.
FIG. 3.—Cat's tibia, 42 days after fixation by a long steel plate and split pins. These have been removed and the bone cut open. There is perfect union. No external callus, visible as such; a short plug of internal callus and a notable thickening of the dense bone of the shaft some distance above and below the fracture.
FIG. 4.—Cat's tibia, 14 days after operation by the double transfixion apparatus. Early ideal repair. A, Islet of cartilage. B, Internal callus, present at this stage only in the upper fragment. C, External callus.

the attention of workers on experimental fractures is the method and origin of callus formation. My observations on this subject have been largely inspired by Sir William Macewen's recent publication on the "Growth of Bone,"[3] and I have recorded them at length in the paper already referred to.

The osteoblast is the living bone unit, and for the most part the osteoblasts are contained in the substance of the dense bone, though they may lie upon its outer surface, beneath the periosteum and in the medullary canal. Therefore it is that the dense bone itself is the primary factor in all matters of repair. When it is injured, the osteoblasts are poured out upon its surface and form the callus of repair. The periosteum, apart from osteoblasts which may adhere to its deep surface, is nothing but a limiting membrane, of great practical importance, because it limits the amount of callus poured out and supplies with blood this new tissue.

FIG. 5.

Cat's tibia, 28 days after a comminuted fracture, treated by the double transfixion apparatus. A, Separate fragments of dense bone. B, Callus mass in which the fragments are embedded. (Figs. 1 to 5 are from the *British Journal of Surgery*.)

These facts are borne out by various of my experiments. When the fracture is surrounded by a metal plate, excluding the periosteum, callus formation occurs between the bone and the plate. It is somewhat scanty and union is slow and weak because the callus gets no periosteal blood-supply. In the comminuted fractures each small particle of bone can be seen to be the centre of new bone proliferation. New bone is sometimes laid down by periosteum. Only one of my experiments showed this. The phenomenon is certainly exceptional and probably due to the osteoblasts which have remained adherent to the deep surfaces of the periosteum when this is separated from the bone.

THE CLINICAL PROBLEM.

Turning now to the practical application of these principles to the clinical treatment of fractures we are confronted by two important questions which to my mind far outweigh all other considerations. The first of these concerns the selection of the cases requiring operation, and the second, the best method of attaining mechanically efficient fixation of the bone. All other matters are either of secondary importance or are merely a part of the routine common to all major surgical procedures. The natural order of these two questions will be first to ask, in what cases is operation required; and the second to ask, how in each case, an ideal operation may be planned and executed. But as my own work has been so largely concerned with the elaboration of operative methods I must reverse the above order and consider first the operative procedures at our disposal before discussing which cases require operation.

The Attainment of Mechanically Efficient Fixation.

I have already explained the experimental evidence, which has so strongly impressed itself upon my mind, that the chief necessity of operative fixation (asepsis being assumed) is mechanical efficiency. By mechanical efficiency I mean a workmanlike artificial junction of the bones which will leave the bone as strong as it was before the fracture, and which will last for an indefinite time.

The arguments for its necessity, derived from experimental evidence and extended to the condition of human fractures, may be summarised as follows: 1. In order to secure stable equilibrium at the site of repair. 2. To avoid post-operative sepsis, and to obviate the necessity of a second operation for the removal of foreign bodies. 3. To allow early massage and movement of the part without the restraints and restrictions of splints and bandages. 4. To prevent a bending of the newly healed bone when it is subjected to the body weight. There is only a minimum of callus laid down with fractures that have been operated upon, and the bone must be reinforced in strength for some time after the ordinary period of hospital treatment. 5. To obviate the disadvantages of delayed union of the bone, if such should occur. 6. To shorten the period of confinement to bed and retention of the case in the hospital.

It is unnecessary to spend time in elaborating the above points; their experimental basis has been already dealt with, and clinical evidence can best be given in describing illustrative cases.

On the Use of Wire.

Until quite recently all operations for uniting bones were performed by silver wire, and it is still a common thing to speak of "wiring" fractures as though this represented the routine operation. But it was very soon evident, when operations were proposed for the attainment of perfect results instead of being merely makeshift devices for dealing with bad compound fractures, that "wiring" as it was then done was very unsatisfactory. Now that plating fractures has been introduced and widely practised "wiring" has not only been generally abandoned, but it has almost fallen into contempt.

It is quite worth while to consider the factors which are concerned in the use of wire, to determine whether it ought to retain any place in our fracture methods. First, then, as to the material of which suture wire is composed. Silver has been used, not only because it is soft and easily manipulated, but probably with an old superstitious idea of the value of one of the precious metals. But it is, in reality, an utterly untrustworthy material. It is a weak suture even at its best, and its strength varies very much according to the way in which it is prepared, so that unless every sample is properly tested there is no reliability to be placed upon it. Again, it has been shown that silver quickly becomes converted into the sulphide when buried in the tissues, and this rapidly weakens the wire. Skiagraphy has shown that not only with fractures, but even when silver wire is used as a filigree in the muscle planes of the abdominal wall, it generally becomes broken up within a short time if it is subject to any tension or movement.[4]

[3] Reviewed in THE LANCET, March 30th, 1912, p. 874.

[4] THE LANCET March 30th, 1912.

Wire made of aluminium-bronze and of plated copper is in some ways a good material, but the copper is a powerful irritant poison in the tissues, which makes me disinclined to use it in either of these forms. In experiments where bronze wire has been used there is always an area of green discolouration in the tissues all round it, caused by the action of the copper. Soft iron wire is far superior to silver. It is much stronger than either bronze or silver. For example, samples of No. 24 (standard wire gauge) of silver, aluminium-bronze, and iron wires had a breaking strain of 31 lb., 44 lb., and 50 lb. respectively, as tested in the engineering laboratory. It is, of course, very cheap and can be obtained tin-plated.

The second point of importance in using wire in bone surgery is that the fragments must be accurately restored to proper position, or at any rate to a stable equilibrium, before the wire is tightened. This is often very difficult to do. The parts are often brought into approximate position and then the wire placed as tightly as possible, or actually used as a traction material. Then when

FIG. 6.

Forceps for tightening and twisting wire when the bone suture has to be done in the depths of a wound.

the muscles begin to act, the badly fitted bone ends become loose, and there is just that loose surrounding with wire which I have above shown to be so inimical to fracture repair.

Again, there is a third error commonly made in the use of wire. It is tightened by being twisted. This always makes a weak place in the wire at the junction of the last twist with the circular piece, and here the wire often breaks. It is absolutely necessary that the wire be drawn tight so as to allow no movement whatever, and when this has been done a single turn should be taken without relaxing the tension, and after the long ends have been cut off three further turns are taken in the short ends without any tension at all. This manipulation has often to be carried out in the depth of the soft tissues, and it is advisable to have some mechanical contrivance, such as the forceps I have devised, to carry it out. (Fig. 6.) The principle of these wire-tightening forceps is that the wire ends are caught in the blades, which open when the handles are pressed together; and a force, which is five times as great as the hand tension used, is applied to the tightening of the wire in exactly the right plane. Then by a single twist of the handles of the forceps the first twist is made, and the forceps can be disconnected whilst the extra safety twists are given and the ends cut off and turned down.

If used under the conditions laid down—i.e., strong material, accurate reposition of the fragments before tightening, and firm tightening before twisting, I believe that wire will serve a purpose in a very restricted number of fractures, which cannot be equalled by any other method. The three cases in which it is especially indicated are fractures of the olecranon and patella and very oblique fractures of long bones where it is difficult to make a complete exposure without serious injury of the soft parts.

In the case of the patella it is most important that the wire should be applied in the form of a single circle which surrounds the circumference of the disc without any kinking. It is a mistake to make the suturing in a vertical plane, because the boring of the patella in this is difficult to do accurately, the wires hold chiefly in the loose cancellous tissue of the bone, and the wires become sharply kinked when tightened and the fragments tilted.

On the Usual Methods of Plating Fractures.

The common method of operative fixation of fractures is the screwing of linear steel plates upon the outer surface of the bone by means of short screws which only hold to the dense bone on one side of the marrow cavity. In spite of the fact that the method in the hands of Sir Arbuthnot Lane has achieved such success that it has become the standard of operative treatment, I would venture to point out the several ways in which it falls short of the ideal of mechanical efficiency to which I think we ought to aim.

I have already given the reasons derived from experiments for saying that the screws, however tightly they are inserted, will become loose within a short time. There is abundant evidence that this is so, too, in clinical practice. In some cases the screws come out before any union has occurred and a gross displacement, worse than that which would have taken place without any operation, results. I have seen this repeatedly, but especially in cases of the upper third of the femur. In other cases the screws hold long enough for union to occur, but nevertheless eventually become loose in the soft tissues and necessitate a further operation for their removal. The insecurity of this method of fixation is admitted by its advocates by their practice of putting up the limb after operation on splints for periods of from four to eight weeks, so that no strain shall be placed upon a lightly joined bone. Such an after-treatment subjects the limb to all the evils of immobilisation that have been so amply demonstrated by Bardenheuer, Lucas-Championnière, and many others. It risks all the disability consequent upon adherent tendons and stiff joints.

Consider for a moment the mechanical conditions of a femur plated in its middle third by a plate 4 inches long with three screws on each side of the fracture, each screw being 1/8 inch thick and

holding in 1/4 inch thickness of dense bone. For the moment let us think of the bone as merely non-vital material. All the screws are in the same line, and therefore the bone, 1 inch thick and 16 inches long, has to be held by the grip of the plate upon a part of its own substance which is 1/4 inch thick, 4 inches long, and 1/8 inch wide. However strong the plate the total strength of the union cannot be greater than that of the piece of bone to which the plate is fixed. The actual width of this piece of bone is only 1/25th of the circumference of the tubular structure of the shaft, and therefore only 1/25th of the strength of the bone can be restored by the use of this method.

Then there is the fact that soon the screws become loose. This disadvantage it is sought to counteract by using many screws. But as all these are in the same line the chief stress must fall upon those nearest the fracture, as will be seen by the accompanying diagram. (Fig. 7.) When there is

FIG. 7.

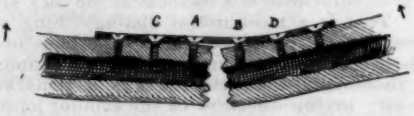


Diagram showing how a long linear plate with short screws becomes loose. However many screws are placed in the bone, any displacing force acting in the direction of the arrows will fall entirely on the two screws, A and B, next to the fracture; when these are loose then C and D will similarly be displaced.

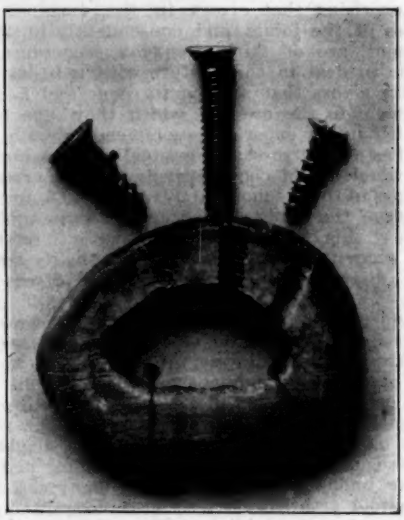
any force tending to bend the bone in the direction of the arrows the plate, unless very massive, will bend slightly, and all the stress will fall first upon the screws A and B and then upon C and D and so on.

Therefore, for all these reasons the linear plating of fractures can only be regarded as a very temporary and insecure union of the bones, which can only succeed if (1) rapid vital union occurs, (2) splints are kept rigidly applied until union has taken place, and (3) that the part be one, such as the lower leg, which can be controlled and immobilised by splints.

One further point of some importance requires mention, and that is the very great superiority of the "metal-threaded" over the "wooden-threaded" screws. (Fig. 8.) This, I think, was first pointed out by Lambotte, of Antwerp, and has been more recently insisted upon by various American surgeons, notably by Sherman and Gerster, but nevertheless the wood screw remains in almost universal use in this country.

The wood screw is intended to bury its thread in the substance of yielding wood, but it cannot do this in a dense bone. A metal screw, on the other hand, must have a female screw thread tapped for its reception, and this is most readily done by some sort of a cutting arrangement at the end of the screw itself. By this means the screw, instead of merely holding by the frictional grip of the very edge of its thread upon the bone, has its whole thread uniformly embedded in the bone, and its grip will thereby be enormously increased in strength. The metal screw holds because it fits into a socket made for it, whilst the wood screw holds in dense bone by the sheer pressure of the edge of its thread upon the hard wall of its socket. Lambotte, by using these metal threaded screws and by not hesitating to perforate the bone, so as to hold it by both sides, has greatly improved the plating method, so as to dispense with the use of the splint in the after-treatment. But even though this firmer and longer fixation of screws improves the method, it does not do away with the objection that the whole strength of the union cannot be greater than the thickness of bone engaged by the single line of screws.

FIG. 8.



A piece of bone into which three screws have been driven. Note the slight grip of the "wood" screws as compared with that of the "metal" screw.

So far I have only referred to the dense structure of the bone shafts. If we consider the structure of the ends of the bone where there is only a very thin shell of dense tissue and all the rest is spongy substance, it is evident that such parts will afford no hold at all for screws.

(To be concluded.)

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held at Caxton House, Westminster, on Jan. 27th, Sir Francis H. Champneys being in the chair. A number of midwives were struck off the roll, the following charges amongst others having been brought forward: The patient suffering from abdominal pains and a temperature of 104° F., the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E.20 (4). Not carrying to a confinement the appliances or antiseptics required by Rule E.2; continuing in attendance upon a patient and being in contact with another patient who was suffering from puerperal fever and not undergoing disinfection to the satisfaction of the local supervising authority as required by Rule E.5. Not wearing a clean dress of washable material when attending a patient, as required by Rule E.1.; neglecting to adopt the antiseptic precautions prescribed by Rules E.3 and 7; not keeping the register of cases, as required by Rule E.23, and medical aid having been sought the midwife neglected to send any notification thereof to the local supervising authority, as required by Rule E.21 (1).

SOME COMMON ERRORS IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE JOINTS.[1]

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THE differentiation of diseases of the joints is not always an easy matter. It certainly requires a considerable amount of experience, and it is therefore not surprising that errors in the diagnosis of diseases of the joints, and consequently in their treatment, are of fairly frequent occurrence. I propose to deal in this lecture with most of the common errors that are apt to occur, and I shall place them in the order in which they have been met with in my experience, commencing with the most frequent errors and gradually proceeding to those which are of comparatively rare occurrence. As errors in the diagnosis and treatment of surgical diseases of the joints will be dealt with in another lecture at this College, I do not propose to refer to acute synovitis, acute suppurative arthritis, tuberculous disease of joints, or syphilitic disease of joints.

1. *Differential diagnosis of rheumatoid arthritis and gout.*—The confusion of these two diseases of the joints in their chronic forms is, in my experience, one of the commonest errors. Of all the forms of chronic joint disease they are the most frequently met with, and therefore are the most apt to be confounded. The differential diagnosis of these diseases is a very important matter, because undoubtedly in the past many cases of rheumatoid arthritis have escaped recognition and have been diagnosed as gout. When it is considered that the treatment of these two diseases is quite different, the necessity of a correct diagnosis is manifest.

The following distinguishing characters show how very different the two diseases are. In the first place, rheumatoid arthritis occurs most commonly in females; gout occurs mostly in males. Rheumatoid arthritis occurs more commonly amongst the poor and ill-nourished; gout mostly among the well-to-do and well-nourished. Rheumatoid arthritis is a disease which is improved by good dieting; in the case of a gouty person a spare and plain diet is indicated. The onset of rheumatoid arthritis is insidious; that of gout sudden and obvious. As regards the commencement of the attack, gout most commonly begins in one of the feet, especially in the great toe joint; rheumatoid arthritis, although ultimately it frequently affects many joints of both hands, nearly always begins in one joint, most commonly selecting one of the joints of the thumb, either the carpo-metacarpal or metacarpo-phalangeal joint, after which it rapidly spreads to the other joints. Then as regards the appearance: in the case of rheumatoid arthritis there is no obvious swelling at first and no marked redness, while in the case of gout at its commencement there is very obvious swelling, marked redness, and a shiny condition of the skin around the affected joint.

In rheumatoid arthritis there is very little pain at first. There is some aching in the joint, but it starts in a very insidious manner. It is this insidious character of the disease which is one of its bad features, for the patients do not seek advice until the affection is fairly advanced. Gout, however, begins in the most marked manner with severe pain, the patient as a rule waking up in the early morning with excruciating pain in the great toe. Therefore if there is doubt as to whether a particular case is one of rheumatoid arthritis or of gout the patient should be questioned as to the commencement of the attack in order to ascertain whether it began with an obvious outburst of pain and with swelling and redness of the joint, or whether it began very insidiously. Then as to the joint affections; apart from what has been stated as to gout generally beginning in the foot and rheumatoid arthritis in the hand, there is one joint commonly affected in rheumatoid arthritis which is not affected in cases of gout—viz., the temporo-maxillary articulation. I have never seen a case of gout in which the temporo-maxillary joint has been affected, whereas in rheumatoid arthritis it is fairly common for that joint to be affected.

In rheumatoid arthritis there is a special liability to the affection of the joints of the cervical vertebræ, as evidenced by pain and stiffness at the back of the neck. This is a most useful distinguishing sign. Another distinction is this, and it is perhaps one of the most important distinctions, that in connexion with rheumatoid arthritis there is a remarkable symmetry in the affection of the smaller joints of the hands. In gout that symmetry is wanting. Lastly, in a case of rheumatoid arthritis sodium biurate is neither found in the joints nor in the blood, whereas in the gouty person sodium biurate exists both in the joints and in the blood.

The not infrequent mistake of diagnosing rheumatoid arthritis as gout, and the consequent placing of the patient on a restricted and spare diet, has undoubtedly led to the development of severe and incurable forms of the disease. It is essentially a disease that requires good and nutritious feeding, and I have seen many cases of rheumatoid arthritis which have gone thoroughly to the bad through the initial error of mistaking the disease for gout and treating it with a spare diet.

2. *Differential diagnosis of chronic rheumatism from rheumatoid arthritis and gout.*—I am sure that many cases which are diagnosed as chronic rheumatism of the joints are not chronic rheumatism at all; many of them are cases of rheumatoid arthritis and a fair number are cases of gout. Though much less frequent than is generally supposed, chronic rheumatic affections of the joints do occur, but they never produce that excessive permanent deformity which the other affections may. These chronic rheumatic affections of the joints are generally accompanied by the formation of fibrous nodules, by the development of extra-articular fibrous thickening, and not infrequently by the indication of valvular disease of the heart. There is generally a well-marked history of rheumatism, and the disease is identical with that described as "chronic fibrous rheumatism." It must not be considered that the subcutaneous fibrous nodules occur only in connexion with rheumatism. They are fairly frequently seen in cases of rheumatoid arthritis, and less frequently in gout, syphilis, influenza, and other diseases.

It should be carefully remembered that chronic rheumatism is not associated with the formation of bony or cartilaginous deposits in the joints. It shows little symmetry, and is usually associated with rheumatic pains shifting about from one place to another. It never affects the temporo-maxillary

[1] Founded on a lecture delivered at the Medical Graduates' College and Polyclinic on Feb. 11th, 1914.

joints. As regards the actual diagnosis of rheumatism, it is usually fairly easy. If a patient complains of pain in the joints, which pain flies about from joint to joint and generally affects some of the muscles at the same time, and if, in connexion with these flying pains, there are indications of the presence of the rheumatic erythema—erythema nodosum—then the diagnosis of rheumatism is obvious. As a rule, the fitful way in which the joints are affected, the fairly rapid subsidence of the swellings of the joints, and the association of muscular pains make the diagnosis a simple matter. The absence of bony thickening and of bony grating distinguishes the disease from rheumatoid arthritis, and in addition the finger-joints are much less frequently affected.

As an assistance in the diagnosis of a chronic articular affection there is a rough but fairly sure test which is frequently of assistance: it is treatment with salicylate of soda. If the case responds well to this treatment it is a case of rheumatism. If it does not respond to this treatment the existence of rheumatoid arthritis or gout is fairly certain, as neither of these affections responds well to salicylates.

Chronic fibrositis of the joints is most frequently met with in the knuckle and finger-joints of those engaged in hard manual labour, especially when associated with damp surroundings. Pads upon the finger-joints constitute a chronic form of localised fibrositis. They form excrescences which are almost confined to the dorsal aspects of the interphalangeal joints of the proximal row, and are only very rarely seen upon the terminal joints of the fingers. They are usually present upon the fingers of both hands, and vary in size from that of a split-pea to that of the half of a hazel-nut. Sometimes they are quite painless, but more often pain of various degrees of severity is complained of, especially when the fingers are flexed or if the lumps are knocked. Patients suffering from these pads generally seek medical advice under the apprehension that they are the precursors or accompaniments of rheumatoid arthritis, or that they are due to chronic gout. There does not, however, appear to be any connexion between these pads and either rheumatoid arthritis or gout. There is, however, an intimate connexion between these pads and Dupuytren's contraction of the palmar fascia, and it is fairly common to see the two conditions together.

3. *Differential diagnosis of acute rheumatoid arthritis and acute rheumatism.*—In its early stages acute rheumatoid arthritis may very closely simulate acute rheumatism, but it may be distinguished from it by not reacting to treatment with salicylates. The disease usually commences in one joint, commonly one of the metacarpophalangeal articulations, and then rapidly spreads to other joints. The disease does not flit from joint to joint as in cases of acute rheumatism, and the joint swellings are persistent. The swelling is at first due to peri-articular thickening rather than to effusion. Rapid muscular wasting, vaso-motor troubles, and pigmentation occur. In the acute and subacute stages the temperature is raised, but as a rule is lower than in acute rheumatism.

4. *Differential diagnosis of acute rheumatism and acute gout.*—As a rule these two diseases in their acute forms can be readily distinguished, but in cases of doubt the question can be settled by attention to the following points. The colour of the affected joints is usually quite different, being of a dusky-red or purple-red colour in acute gout, and of a pale rose pink in acute rheumatism. Acute gout as a rule only starts in one joint, whereas in acute rheumatism several joints are simultaneously affected. The pain of the affected joint in acute gout is much more severe than in acute rheumatism, especially when the joint is touched or handled. The swelling of the joint is usually much greater in acute gout than in acute rheumatism. The sweating in cases of acute gout is slight in comparison with the profuse sour-smelling perspiration of acute rheumatism.

5. *Differential diagnosis of chronic villous synovitis from arthritis and displaced cartilage.*—In my experience it is a very common error to mistake a chronic villous synovitis, usually of one or both knees, for an arthritis. Chronic villous synovitis is a purely local condition and not a manifestation of a general disease. It is, unfortunately, described in some text-books as "arthritis sicca." It usually occurs in the knee, and is characterised by crepitus or creaking on movement and by pain and tenderness on use. The crepitus during movement of the joint is frequently unpleasantly audible to the patient, and is especially caused by going up or down stairs. The capsule and the ligaments of the joint are more or less relaxed and the synovial membrane is passively congested and loose. The crepitation on movement is due to the folds of the flabby congested membrane rubbing together—in other words, it is a true creaking and not a bony grating. If further relaxation of the synovial membrane results, hernial-like projections of the synovial fringe may be produced which are apt to cause a catching or locking of the joint when it is moved. In this class of cases the fluid in the joint is generally quite normal, although, if there be great irritation, some excess of it may form. The condition is very frequently mistaken for rheumatoid arthritis, but there is no erosion of cartilage and no eburnation of the ends of the bones, consequently bony grating can never be produced in such joints.

A valuable aid to the recognition of this condition and to its differentiation from rheumatoid arthritis is the careful auscultation of the joint. The knee-joint should be slowly flexed and extended during the examination, and in this way the peculiar crackle or crepitus that is produced by the thickened and flabby synovial membrane is easily distinguished from the scrunch or grating sound that occurs in cases of rheumatoid arthritis, and which is due to abrasion or erosion of the cartilages.

In a few cases of chronic villous synovitis of the knees the hypertrophied fringes, as the result of chronic inflammation, act as foreign bodies, and their removal may be necessary to effect a cure. Many cases of so-called displaced cartilage in the knee-joint are due to the nipping of these hypertrophied and protruding fringes.

6. *Differential diagnosis of subacromial bursitis and arthritis of the shoulder-joint.*—The confusion of these two conditions is a fairly common error. In both cases the pain is complained of in, or in the vicinity of, the shoulder-joint, and in both cases a marked sound may be elicited on movement of the joint. The condition of the bursa is one of a chronic fibrositis, which may occur in any of the bursæ, but is especially apt to occur in connexion with the subacromial bursa, which is the same as the so-called subdeltoid bursa. The other bursæ which exist about the shoulder-joint are relatively

unimportant, as inflammation in them is of but little mechanical importance.

This condition, which explains the frequency of stiff and painful shoulders, is very apt to be mistaken for arthritis or fibrous ankylosis of the shoulder-joint or for brachial neuritis. Severe pain as regards abduction and rotation are the chief symptoms, and the pain may be so severe as to prevent restful sleep. The pain is often felt at the insertion of the deltoid, and I believe that many cases of so-called dislodgment of the biceps tendon from its groove are cases of subacromial bursitis.

The distinction of the bursitis from arthritis is not a matter of great difficulty if attention is given to the following points. In the first place, in cases of subacromial bursitis sudden abduction of the arm always causes severe pain owing to the compression of the inflamed bursa, whereas in cases of arthritis the same movement causes but slight pain. In the second place, rotatory movements of the head of the humerus produce quite different sounds in the two conditions, the sound in cases of subacromial bursitis being very similar to that previously referred to in connexion with chronic villous synovitis of the knee, while in cases of arthritis of the shoulder-joint the definite bony grating sound is obtained. If there should still be doubt as to the differentiation of the two conditions it can be easily settled by an X ray examination of the joint, which in cases of subacromial bursitis will show a perfectly normal condition of the joint.

7. *Differential diagnosis of fibrositis of the retro-collic muscles and arthritis of the cervical vertebral joints.*—This is a fairly common error in diagnosis in connexion with pain and stiffness at the back of the neck. The peculiar creaking of the affected muscles is mistaken for bony grating in the cervical vertebral joints, but the sounds, to those who are acquainted with them, are entirely different. Apart from this characteristic difference in the sounds the differential diagnosis is rendered easy by attention to the following points: (1) In cases of arthritis pain is elicited by firm pressure on the spinous processes of the affected vertebræ; (2) in cases of fibrositis the pain is only elicited by pressure on the affected muscles, generally the trapezius and sternoid-mastoid, on one or both sides of the neck; (3) auscultation will at once distinguish between the peculiar bony grating of arthritis and the creaking sound of the muscular fibrositis. If there should still be doubt it can be settled by an X ray examination of the cervical spine, which in cases of arthritis will show the characteristic bony changes.

8. *Differential diagnosis of sciatica and lumbago from arthritis of the hip-joint.*—The confusion of these three diseases is, in my experience, a fairly common occurrence. The error is especially apt to be made in mistaking sciatica for hip-joint disease or *vice versâ*. In both diseases the distribution of the pain from the hip to the knee leads to the occurrence of the mistake, but the differential diagnosis is a fairly easy matter. It consists in submitting the hip-joint to the tests of certain movements and of direct pressure, and in putting the sciatic nerve on the stretch. If arthritis of the hip-joint is present, it is readily recognised by the pain produced by rotation of the femur outwards and by adduction in the flexed position, both of which movements put the inflamed ligamentum teres on the stretch and cause severe pain within the joint. Also in cases of arthritis of the hip-joint severe pain is produced within the joint by firm pressure at a point midway between the anterior superior spine of the ilium and the upper border of the great trochanter. In cases of sciatica the movements and pressure just referred to do not cause pain. On the other hand, gradual flexion of the entire lower extremity at the hip with the knee fully extended will cause marked pain in cases of sciatica owing to the stretching of the sciatic nerve, but will cause only slight or no appreciable pain in cases of arthritis of the hip-joint. If doubt should still exist, the question can be settled by an X ray examination of the hip-joint, which will show well-marked changes in cases of arthritis but no deviation from the normal in cases of sciatica.

The confusion of lumbago for arthritis of the hip-joint is not so common an error as the former one, but occasionally occurs when the lumbago takes the form, as it so frequently does, of a sacro-iliac fibrositis. The fairly close proximity of the sacro-iliac and the hip-joints favours the mistake. The distinction of the two diseases is an easy matter. The movements of and direct pressure on the hip-joint previously referred to cause no pain in cases of sacro-iliac fibrositis, whereas in such cases direct pressure along the line of the sacro-iliac joint causes severe pain. Pressure along this line causes no pain in cases of hip-joint disease. If necessary an X ray examination of the hip-joint will settle the diagnosis.

9. *Tennis or golf elbow mistaken for arthritis of the elbow-joint.*—Tennis or golf elbow is due to a localised traumatic fibrositis of the attachments of the muscles to the external or internal condyle of the humerus, commonly the former. It is easily recognised by the pain produced by direct pressure just beneath the condyle on the affected side. Gentle flexion and extension of the elbow-joint cause no pain, as they do in cases of arthritis of that joint. It is practically never necessary to resort to an X ray examination in connexion with the differential diganosis of these two conditions.

10. *Differential diagnosis of gonococcal arthritis from acute rheumatism and rheumatoid arthritis.*—Gonococcal arthritis is in its acute form most apt to be mistaken for acute rheumatism, and in its more chronic forms for rheumatoid arthritis. In the acute form one joint after another is affected, and, as in acute rheumatism, the effusion frequently subsides in one joint as another is infected, and relapses are common. It is always secondary to a gonococcal attack elsewhere. This attack is generally in the urethra, but is not necessarily so, as some cases have followed infection of the conjunctiva. The arthritis is due to the presence of the gonococcus in the joints. It usually appears at the decline of the urethritis, or even when this appears to be cured. It is not, therefore, directly proportional to the acuteness of the urethritis. It rarely develops before the third week, and its advent may be postponed for several months after the onset of the gonorrhœa. Time is required for the gonococci to reach the glandular tissues of the prostate, whence they are enabled to enter the circulation. This form of arthritis is in the majority of cases polyarticular. It may begin as an acute arthritis, but generally the onset is more or less gradual, with pain in one joint usually extending to other joints in succession. It is most liable to affect the larger joints, especially the knees; the joints that may also be affected are the ankles, elbows, small joints of the feet and hands, shoulders, wrists, and the sterno-clavicular

joints. The existence of urethral discharge containing gonococci and the non-reaction of the disease to salicylates are the main points of distinction from acute rheumatism. In about two-thirds of the cases the gonococcus can be isolated from the fluid in the joints.

The treatment consists in subduing the urethral inflammation and the employment of rest, pressure, and counter-irritation to the joints. An autogenous or stock vaccine should also be used. It is preferable to employ an autogenous one, as it is not uncommon for the arthritis to be due to one of the secondary organisms that so frequently accompany the gonococcal infection.

11. *Differential diagnosis of infective or septic arthritis from gout, rheumatism, and rheumatoid arthritis.*—In cases of infective arthritis other than rheumatoid arthritis there is a general infection, with very acute onset, marked constitutional symptoms, high temperature, and rapid but not progressive joint involvement. Enlargement of the lymphatic glands in association with the infected joints almost always occurs, the spleen is commonly enlarged, and leucocytosis is present. In cases of infective arthritis the larger joints are by preference attacked, and in most cases show a definite red blush, with inflammatory œdema of the affected limb, as opposed to the white or bluish colour of the joints in rheumatoid arthritis.

If a case of infective arthritis is seen long after the initial disease has subsided then it may closely simulate a case of rheumatoid arthritis, but a distinction can then be made by the use of the X rays. In cases of rheumatoid arthritis a characteristic rarefaction of the ends of the bones in the vicinity of the affected joints is seen, whereas in cases of infective arthritis the rarefaction is much more diffuse and not infrequently involves the entire shaft.

12. *Differential diagnosis of cellulitis from acute gout.*—I have met with several cases in which these two diseases have been confused. The error practically only occurs in connexion with a localised cellulitis of the foot or hand, which may then somewhat superficially resemble an attack of gout in the tendon sheaths. The mistake is not likely to arise in connexion with acute gout in a joint. In the great majority of cases of cellulitis a definite wound or abrasion, which has given entrance to the causative organisms, can be found. Moreover, the pain of acute gout is much greater than in cases of cellulitis. The treatment of the two conditions is obviously quite different.

13. *Differential diagnosis of enlarged bursæ from gout and arthritis.*—An inflamed or suppurating bunion is occasionally mistaken for gout of the great toe-joint. The error ought not to occur, as the superficial and localised character of the bunion should at once distinguish it from gout. Enlarged bursæ in the neighbourhood of joints, and especially of the knee-joint, are apt to be mistaken for arthritis. The differential diagnosis is a very easy matter, owing to the well-defined and localised enlargement of the bursa or bursæ and to the fact that careful examination and manipulation of the joint demonstrate that it is not involved in any arthritic changes. In such cases of bursal enlargement, which are occasionally tuberculous, the only effective treatment is to have the affected bursa or bursæ carefully dissected out.

14. *Differential diagnosis of intermittent hydrarthrosis from rheumatic synovitis and arthritis.*—Intermittent hydrarthrosis is a recurrence of passive effusion into one or more joints without any permanent lesion resulting. The effusions may occur into apparently normal joints or into joints previously the seat of disease or injury, but the knee-joint is the one most commonly affected. It is unattended by pain and a large number of the patients are unaware of its existence unless attention is called to it accidentally. It is best recognised when the patient is standing in the upright position, when the fluid sinks to the lower part of the joint cavity and sometimes forms a pouch-like overhanging of the synovial membrane at its lower anterior aspect. Attention is generally called to the condition by a slight injury, such as a twist or fall. The joints of the two sides are usually involved at the same time, but the effusion is, as a rule, much more marked on one side than on the other, that on the right side being generally the greater.

This condition is most apt to be mistaken for a rheumatic synovitis or arthritis, but is easily distinguished by the absence of pain. The treatment consists in the use of massage, exercise in the open air, the employment of the Schnee bath or of radiant heat, and the administration of arsenic over a prolonged period.

15. *Differential diagnosis of pneumococcal arthritis and acute rheumatism.*—Pneumococcal arthritis occasionally occurs as a sequel to pneumonia and other pneumococcal lesions, and is apt to be mistaken for acute rheumatism. The distinction is, however, very simple, as a pneumococcal arthritis does not yield to salicylates. Previous damage to a joint, as by injury, rheumatism, or gout, favours the localisation of this form of arthritis. The pneumococci can usually be recovered from the fluid of the joint, and an autogenous vaccine should be employed as soon as possible. If suppuration occurs the joint must be freely opened and treated in a similar way to other forms of purulent arthritis.

16. *Differential diagnosis of Still's disease from rheumatoid arthritis.*—Still's disease in children closely resembles rheumatoid arthritis. It differs, however, from the latter disease in that the spleen, liver, and lymphatic glands are enlarged, and that it occurs only in children, and mostly in young girls. The four important points in the differential diagnosis of this disease from rheumatoid arthritis are: (1) The enlargement of the glands; (2) the enlargement of the spleen; (3) the peculiar appearance and feel of the joints, with the absence of bony grating on manipulation and the absence of osteophytic outgrowths; and (4) the fact that the disease begins nearly always in the knees or wrists and affects the fingers much later, whereas rheumatoid arthritis affects the small joints of the hands early, and frequently commences in them.

17. *Differential diagnosis of Raynaud's disease from rheumatoid arthritis.*—The confusion of these two diseases constitutes an occasional error in diagnosis, and therefore in treatment. It is only when Raynaud's disease of the hands and feet is associated with scleroderma that the mistake is likely to occur. The differential diagnosis is rendered easy by attention to the three following points: (1) The circulatory changes which always accompany Raynaud's disease do not occur in rheumatoid arthritis; (2) scleroderma is never associated with rheumatoid arthritis; (3) in Raynaud's disease the X rays do not reveal the characteristic changes in the ends of the bones that are always present in rheumatoid arthritis.

18. *Differential diagnosis of Charcot's disease of*

the joints from osteo-arthritis.—The arthropathy known as Charcot's joint is occasionally mistaken for an osteo-arthritis, but the association of it with locomotor ataxy, the rapid effusion, the usually rapid destruction of the cartilages and bones, and the remarkable absence of pain should prevent such an error in diagnosis.

Queen Anne-street, W.

MITRAL STENOSIS, CARDIAC THROMBOSIS, AORTIC EMBOLISM, AND GANGRENE OF BOTH LEGS.

BY H. E. SYMES-THOMPSON, M.A., M.D. CANTAB., M.R.C.P. LOND.,

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THE following case is interesting, not only because it is unusual, but also owing to the difficulty which it presented in the diagnosis of the underlying cause. The embolus measured 1¼ inches by ¼ inch, and it lodged at the bifurcation of the aorta, being too large to enter one of the common iliac arteries. The diameters of the common iliac and the common carotid arteries are ½ inch and ⅓ inch respectively; and we usually regard an embolus which plugs one of these vessels, causing unilateral gangrene or sudden death, as a large embolus. The embolus in this case was therefore of exceptional dimensions. The diagnosis of mitral stenosis could not be established during life. There was some irregularity of the heart, but nothing else on which to found such a diagnosis could be made out; and there was no history of rheumatism. The thickening and tortuosity of the arteries suggested the possibility of syphilitic endarteritis, but the Wassermann test gave a negative result. The absence of sugar from the urine excluded diabetic gangrene.

The patient, a man aged 47, was admitted to the Great Northern Central Hospital on Feb. 5th, 1913, complaining of discoloration of the legs accompanied by pain and loss of power. The illness had begun 14 days previously, when pain came on suddenly in the legs. The pain was like pins and needles, was worse at night, and was marked by exacerbations and remissions. For five days he had ceased to be able to move his legs, and for one day he had noticed that his legs were blue. There had been a slight cough with a little expectoration since the illness began, and some shortness of breath for five days. Neither the past personal history nor the family history presented anything noteworthy. He had not been abroad; there was no history of rheumatism or syphilis.

On admission the patient was poorly nourished and markedly anæmic. His mouth and fingers were twitching. The distal parts of both lower limbs were purple in colour, cold, painful, and tender. Demarcation lines divided the purple from the normal skin four inches above the knee-joint on the right side, and two inches below the knee-joint on the left. Immediately above the demarcation lines the limbs were hot, œdematous, and acutely tender. No pulsation could be felt in the femoral or popliteal arteries. Pain and thermal sensation were absent over the affected areas, and sensation to touch was impaired. The apex beat of the heart was in the fifth left interspace four inches from the middle line. The heart's action was rapid, and some irregularity was present. The sounds lacked tone, but no murmurs were heard. The cardiac dulness was difficult to determine owing to the presence of emphysema in marked degree. Many of the heart-beats did not reach the wrist, and the pulse was irregular in force and rhythm. The arteries were thick and tortuous, and the blood pressure was equal to the weight of 130 mm. of mercury. The percussion note of the chest was hyperresonant, and the lungs obliterated the superficial cardiac dulness. The expansion of the chest and the respiratory murmur were poor. The abdomen was normal. The urine was acid, with a specific gravity of 1020. There was no sugar or blood, but a cloud of albumin appeared on boiling. The nervous system presented no abnormality except in the gangrenous areas. The temperature was 100° F., the pulse-rate was 130 per minute, and the respirations 36.

On Feb. 7th blebs appeared on the legs, and there was a papule of pus near the line of demarcation on the right side. The albumin had disappeared from the urine. On the 10th the blebs were more numerous. Pink patches had appeared on the legs, which contrasted with the purple colour of the rest of the gangrenous areas, at the upper limits of which numerous petechiæ had become visible. Some extension of the gangrene was also noticed. The general condition had deteriorated and the pulse had become very irregular, though the pain was less acute. On the 14th there was a rigor. By this time many of the blebs had broken down, and their surfaces had become raw and offensive. Some blood was removed from a vein for a blood culture and the Wassermann test was made, both investigations giving a negative result. After this there was a rigor each day, and the patient went downhill rapidly. The heart became more and more feeble, and death took place on the 17th. It proved necessary throughout to give morphia every few hours to alleviate the pain. The temperature was irregular, varying as a rule between 100° and 104°, and occasionally dropping to the normal line.

The post-mortem examination was made by Mr. E. H. Shaw on Feb. 18th. The following points are extracted from his report. The left foot and leg up to the knee were black and moist, the toes being dry. The right lower extremity up to the thigh was in a similar condition. A small hæmorrhagic infarct was found under the pleura at the right pulmonary base. The heart was enlarged. The left auricle was much dilated, and the wall was thickened. The endocardium was white. The left auricular appendix was filled by white, friable, laminated clot, which projected into the auricle. The clot was lightly adherent to the wall. The mitral valve was stenosed by adherence of both cusps at their margins to form a narrow orifice about 1¼ inches long. The segments were thick and fibrous. The chordæ tendineæ were a little thickened, as were also the aortic segments. The other valves were natural. The aorta showed some small patches of atheroma. Lightly attached to the wall of the abdominal aorta at the point of bifurcation was a partly decolourised, laminated clot with dimensions of about 1¼ inches by ¼ inch. From this a cylindrical smooth red clot extended into the right common iliac artery for about two inches. There were also some small loose pieces of red clot lightly adherent to the vessel wall along the remainder of the common iliac artery, extending also into the femoral artery. The wall was deeply blood-stained and thickened. The connective tissue

outside the wall was also thickened. The left common iliac artery was partly obstructed at its origin, and there were loose pieces of blood-clot extending downwards and into the femoral, the artery being deeply blood-stained. The large branches of the right iliac were plugged with clot. The vena cava was deeply blood-stained, and contained a few small, soft, red pieces of clot, and the iliac veins were in a similar condition. Near the origin of the femoral vein each vein was filled with red clot, the clot extending along and filling the femoral vein. The clot was soft and lightly adherent to the wall. The tributaries of both veins contained similar clots. The tissues of the thighs contained much lymph. From the heart blood a growth of bacillus coli communis was obtained.

For the clinical notes of the case I am indebted to Mr. E. Smeed, house physician.

Cavendish-square, W.

A NEW METHOD OF TREATING CHRONIC COLI-CYSTITIS AND OTHER BACTERIAL INFECTIONS.

BY CHARLES RUSS, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

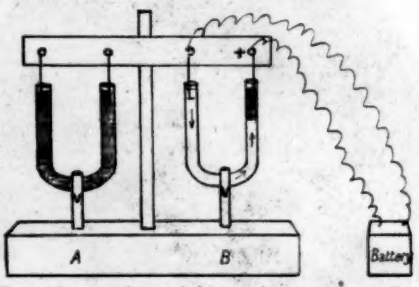
IN June, 1909, I read before the Royal Society a paper on the Electrical Reactions of Certain Bacteria and an Application in the Detection of Tubercle Bacillus in Urine by Means of an Electric Current.[1] In this paper I showed that certain bacteria suspended in an electrolyte through which a current passes aggregate at one or other of the electrodes during the passage of the current, and that the aggregation varies with the nature of the electrolyte and is probably due to affinity between the products of electrolysis and of the bacteria. I subsequently found that electrification of the bacteria in certain solutions kills them. Demonstrations were given at meetings of the Pathological Section of the Royal Society of Medicine in January, 1910; British Medical Association in July, 1910; and at the International Hygiene Exhibition, Dresden, 1911.

Since these laboratory observations I have during the last few years devoted considerable time to their application for the relief or cure of certain suppurative human diseases.

Preliminary considerations.—Since nearly all pathogenic bacteria move to the positive pole during electrolysis in sodium chloride solution (Fig. 1), I thought they might be drawn out of ulcers and infected mucous membranes, &c., if a column of sodium chloride were superimposed on the diseased area and a current passed in the appropriate direction. If the positive pole were submerged in such a column of saline and the organisms drawn to it by the current, then, as the tissues became free from the bacteria, recovery would ensue. Incidentally also the bacteria would be killed during the process.

The first cases treated (varicose ulcers, septic fingers).—In 1911 I commenced this study by applying the above-mentioned ideas to chronic varicose ulcers of the legs. These are lesions which can be seen during treatment and are accessible and easily measured. By the courtesy of Dr. C. T. Parsons I treated a short series of such cases at the Fulham Infirmary. The majority were healed. The largest was about 5 by 3 inches, and the smallest about 1 inch square. The method devised was as follows. A varicose ulcer was encircled by a special glass vessel larger than its area and fixed in a watertight manner to the surrounding healthy skin by plasticine. The vessel was nearly filled with saline solution, and furnished with a submerged anode of platinum foil. An electric current was passed from the calf resting on a wet cathode pad (bolster) through the limb, traversing the ulcer to reach the overhanging anode. In this way the bacteria in the ulcer were expected to migrate to the anode, and if they left the ulcer or were killed it would be free to heal. Many experiments as to the amount and duration

FIG. 1.



Bacterial suspension, A, before passing current; B, after passing current.

of current passed were made until favourable results were usually obtained. In the intervals between treatment only a cold compress of saline was applied to the ulcer. These ulcers were of years', months', or weeks' duration, and were systematically measured as to their greatest diameters before each treatment. In the first case, to estimate the number of bacteria withdrawn by the process, a control was undertaken by planting a sample of the saline (stirred over the ulcer) before polarisation, and counting the colonies which developed from 1 c.c. and ½ c.c. on agar plates, and also after polarisation for 10 minutes. The result—namely, no growth in the second set of plates—was a sharp reminder of the importance of the bacteric dal effect of the treatment, in addition to any effect of drawing organisms out of the ulcers.

In view of a friendly challenge that my electrical attentions were doing no more than rest in bed would produce, one of the patients was kept in bed and treated by ointment for 14 days. The measurements before and after this test showed enlargement of the ulcer, but it diminished as soon as I began again. Of course, the varicose factor, unless surgically removed, almost ensures a relapse, but I was satisfied after six months' attention to these ulcers that this process needed much more study.

Septic fingers.—Mr. C. R. C. Lyster last year treated several cases of acute and severe suppuration of the fingers (casualty hands) at the Middlesex Hospital by this principle of fluid electrolysis, with very satisfactory results.

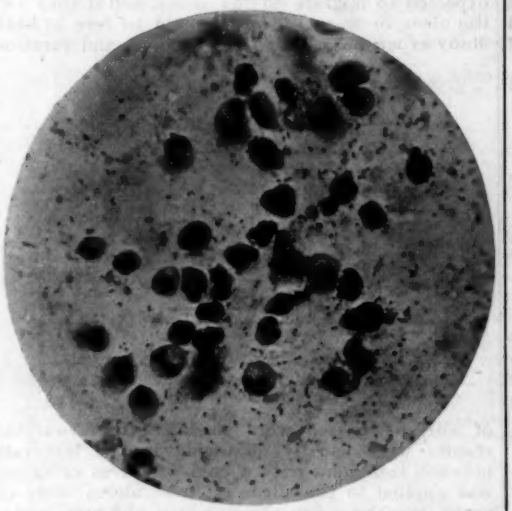
Coli-cystitis.

After reading the original paper a surgeon asked me whether the bacilli might not be withdrawn from the bladder in coli-cystitis. I presently sought an opportunity to test its value in that disorder. After analysis of several thousand urines of acute and chronic cystitis one is impressed with the almost constant prevalence of colon bacilli as

[1] Proceedings of the Royal Society, 1909, B, vol. lxxxi., p. 314; THE LANCET, July 3rd, 1909, p. 2.

the invaders of the bladder. These bacilli, whether the true bacillus coli communis or one of its relations within the colon group, are small bacilli whose access to the bladder has been the subject of much speculation. Seldom, perhaps, is their route proved. It may be that their spontaneous motility supplies sufficient motive power for them to traverse the recto-vesical partition if some other abnormal factor be also present. However, the condition is well known clinically and the essential pathological features are the presence of pus and

FIG. 2.



The bacilli and pus cells in the urine of a typical case of coli cystitis before electrical treatment. 1/6th objective. Gram's stain.

bacilli in the vesical urine in cystitis (Fig. 2) and of bacilli only in bacilluria.

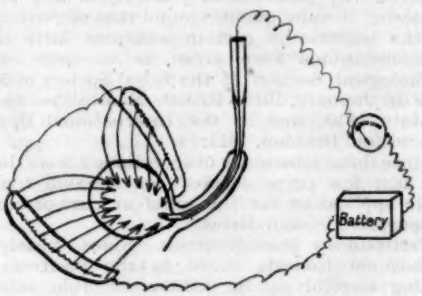
The cure of the condition involves the extermination of these organisms, and this is a problem of some magnitude. The bacilli multiply at a rapid rate in the urine and bladder mucosa, and although the majority are expelled by urinary voidance the residual bacilli soon reproduce and the cycle of events proceeds. Recovery in a chronic case is characterised by diminution and disappearance of the pus, and later the same happens to the bacilli. Coincident with these changes there is a loss of the morbid symptoms clinically. The remedies in ordinary use are intended to act in various ways. By the use of drugs of the urotropine class we endeavour to kill the bacilli by producing a germicide in the urine—a state inimical to their multiplication. Lavage cleans the bladder, but needs repetition to deal with the new bacillary population arising from the survivors of the last wash-out. Injections of germicides need to be weak enough to spare the mucosa from injury whilst killing the organisms. Vaccines acting *vid* the blood stream appear to alter the absorption of the coli toxin and induce a better feeling in the patient; and a certain number of recoveries have followed their use. All these methods are notoriously unsatisfactory.

As a laboratory experiment I had so often seen the migration of the colon bacilli to the anode in salt solution (Fig. 1) that it seemed not unreasonable that the same movement and the lethal effect might be induced if similar conditions were arranged in the human bladder. Removal of the organisms dead or alive faster than they multiply is a line of treatment that must cure the disorder, and a practical test would show whether this could be done.

The modus operandi.—After voidance of any urine the patient reclined on a couch, and a broad abdominal belt of layers of lint was passed round the lower part of the trunk. This belt, which carried a core of metallic gauze, was wrung out with warm salt solution before application. Next a rubber catheter, furnished with several perforations round its eye, was passed into the bladder. The free end of this catheter was connected to 8 inches of glass tubing, which in turn was joined by a short length of rubber tubing to a glass funnel —everything being sterilised. A few ounces of the salt solution (2 per cent.) were next passed into the bladder, and the glass tubing, after disconnexion from the funnel, was clamped a little above the level of the pelvis. A platinum wire 6 to 8 inches long was next passed down the catheter to within 2 inches of its eye. This wire was connected to the positive and the core of the belt to the negative poles of the electric battery. The fluid in the bladder rose and fell in the glass tubing with the respiratory movements, and its movement served as an indicator that the catheter eye was within the vesical cavity. A constant current was now gradually turned on to a magnitude of 3 to 5 milliampères, and was allowed to run for 20 or 30 minutes. The scheme of the system is shown in Fig. 3. The patient feels no discomfort during the process.

Dr. A. Allport kindly provided me with my first case of chronic coli-cystitis—a patient whom, however, he also suspected of a vesical stone. The

FIG. 3.



Scheme of the circuiting and lines of force operating through the human bladder.

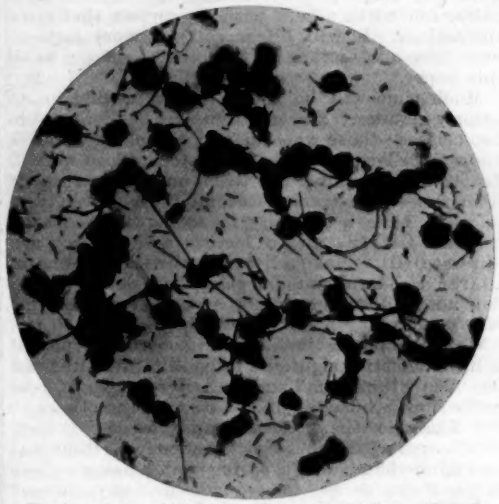
patient had pain, often of a spasmodic type, which was rather relieved than otherwise by micturition. Stone being suspected, the bladder was sounded, but under great difficulty owing to the extreme pain and vesical tenesmus which the sound produced. No stone was detected, and cystoscopy was impossible except under an anæsthetic. The patient, who was 63 years of age and weighed about 16 st., had suffered from cystitis for four years. His condition was one of one- or two-hourly frequency by day and two- to three-hourly at night. An examination of his urine showed no tubercle bacilli. He passed no more than 3 ounces of urine at a time, which contained 2 drachms of pus and was teeming with colon bacilli. It was acid in reaction, and was also examined chemically and by culture. I treated this patient on the above lines daily or on

alternate days for about three months with varying strengths of electric current, duration of treatment, and various reagents, but although his condition improved the progress was not so great as I anticipated. The treatment was suspended for three months, after which the patient was very anxious to resume the electrolysis, and I decided to try another reagent—namely, iodic acid. This substance has certain excellent electrochemical qualities, and I used it eventually in a strength of 1 in 1500, the wire now being the cathode, and with very good results. After a few weeks his pus had diminished to ½ drachm in 5½ ounces of urine, but his pain persisted, and while temporarily using a more rigid catheter I felt a grating sensation, suggesting a calculus. By this time his bladder was so much more tolerant that Dr. Allport had no difficulty in passing a metal sound, when a stone was detected, which was presently crushed in hospital. His urine still contained a trace of pus and numerous transformed bacilli, but with no electric treatment he has not been out of bed for urinary voidance for three months, and holds urine three hours and sometimes longer by day. He is actively carrying on his occupation.

I next treated a short series of chronic cases, chiefly men over 70 years of age, and having about an ounce of residual urine. They were worried by night and day frequency, and had had chronic cystitis for several years. After a few weeks' treatment by iodic acid electrolysis they were all improved. Their pus was reduced, and their frequency quickly improved by a minimum of 33 per cent. on their average number of voidances for the 24 hours—i.e., 12 frequencies became 8 per 24 hours. The frequencies in these cases had to be recorded carefully by day and night before and during treatment, as the patient's impressions are liable to be vague. These patients had not the additional assistance of vaccines, drugs, or other medication. The important question of relapse is one that I am unable at present to answer, but provided the bacilli have been transformed (Fig. 4) there is apparently no relapse.

An effect upon the bacilli.—I have mentioned the germicidal effect anticipated, and also that of drawing the organisms electrically from the affected part. The former was proved on more than one occasion by finding cultivations sterile, which I made from the vesical fluid (iodic acid and urine) at the end of a treatment. This lethal effect was, however, not invariably produced, and while these patients were improving as to their frequency and their pus production there still were bacilluria and some pus present. I was not satisfied that the diminution of these factors was large enough to account for the clinical improvement. However, microscopic examination of the urine showed a new and, I believe, important feature. I refer to the changed appearance of the bacilli, which is manifest in Fig. 4. This is a microphotograph of one of the urines. The average size of a colon bacillus is that of almost the smallest of the bacilli in the field. In cases of chronic cystitis which are slowly recovering from the disorder by other agencies than electricity one sometimes sees a lengthening of the bacilli in their urine, but it is only a fraction of that in Fig. 4. The attenuation of the bacilli has been brought about by the vesical polarisation which I administered. Now if this visible attenuation of form has been accompanied by a reduced bacillary virulence, we have an explanation of the benefit induced in the patient. Reduced bacterial virulence must be associated with less inflammation, which in cystitis is evidenced by less pus formation. Reduced inflammation of the bladder means more tolerance of distension—i.e., less frequency. There is also a change in the staining reaction of the bacilli to Gram's stain. Within the same bacillus there is often a Gram negative and positive effect. If this is the true interpretation of the changes in the bacilli, then the factors in the process which most rapidly produce this attenuation must be precisely determined and brought into

FIG. 4.



Showing a drop of urine containing pus cells and the transformed colon bacilli. 1/6th objective. Gram's stain.

action for the benefit of the patient. I have also produced a moderate lengthening of the true bacillus coli communis by electrolysis in U tubes in the incubator. I hope to make more extensive observations in the future of this effect, which was quite unanticipated.

Gonorrhœa.—I also took the opportunity of trying the process in two cases. I failed in one of a year's duration, though the volume of discharge was reduced. In the other of three weeks' duration I arrested the discharge after the fifth dose of current. The instruments and technique were different and so was the fluid used, but I have confidence in the developments of the process in gonorrhœa.

In conclusion, I acknowledge the assistance of a grant in aid of the expense of this research by the Royal Society. I am also indebted to Mr. E. H. Fenwick, Mr. Lyster, Dr. Allport, Dr. Parsons, and Dr. Wall for their interest and assistance in providing cases.

Beaumont-street, W.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general meeting of this association will be held, by the courtesy of Dr. T. Stewart Adair, at Storthes Hall Asylum, near Huddersfield, at 3 P.M. on Thursday next, Feb. 19th, under the presidency of Dr. James Chambers. The asylum will be open for inspection from 11 A.M. that day, and Dr. Adair kindly invites members to luncheon at 1.30 P.M. A paper on the Clinical Significance of Katatonic Symptoms will be read by Dr. Henry Devine, and tea will be provided after the meeting. The quarterly dinner will be held that evening at the George Hotel, Huddersfield, at 6.45 for 7 o'clock.

ERRORS OF REFRACTION IN SCHOOL CHILDREN.[1]

BY ARCHIBALD STANLEY PERCIVAL, M.A., M.B. CAMB.,
SENIOR SURGEON TO THE NEWCASTLE EYE INFIRMARY.

THIS subject has been allotted to me by the authorities, and I may say in passing that it is not the one I should have chosen myself; for obviously there are some of you who only wish to know the best and shortest way to diagnose an error of refraction, while others wish to correct that error themselves. It will, I fear, call for much forbearance from one section or the other to listen to all this paper.

Much time will be saved by proceeding in an orderly manner. Now children may be divided into two classes—those who do and those who do not know their letters; these illiterate children we will denote by the symbol Il. Insist on having a report from the school teachers of all the children who seem to have a difficulty in seeing (D), headache troubles (H), &c., and a further note if they are illiterate (Il). Make a list in a vertical column of all the children you are going to examine, with the notes of the reports you have received. (See Table.)

We will suppose that Arthur Roberts is reported to have defective sight and to be illiterate; Richard Doe also illiterate; Thomas Anderson is said to suffer from headaches, and so on with the others.

1. Examine the external appearance of each child's eyes with the large lens for focal illumination in one hand, and a spring watchmaker's glass in your eye so as to see whether any corneal trouble is present—ulcers, nebulæ, &c.—or whether there is any haziness of the pupil that may be due to lamellar cataract. Note at once on the paper opposite the child's name anything that you notice—e.g., C.C.S. for convergent concomitant strabismus, or the ordinary internal squint, D.S. for divergent squint, Neb. for nebula, &c. Now we suppose that we have found that Arthur Roberts has a nebula in each eye, while Richard Doe has a squint and also a nebula in his right eye. Then our table will begin in this way:—

Name.	Report.	Observations.
A. R.	Il.	R. Neb. L. Neb.
R. D.	Il.	C.C.S. R. Neb. L.

Now as in the first case both the corneæ are nebulous it is impossible to discover an error of refraction, so do not waste time, but send the child to his medical man for appropriate treatment for the nebula—thiosinamine or Pagenstecher's ointment or dionine, or whatever the child's doctor thinks is most fitting. This is, of course, not a case of refraction, and we must stick to our subject if we are to get through with it.

In the second case we at once put in homatropine into the clear eye—i.e., the left eye. In three-quarters of an hour or so the homatropine will have dilated the pupil and paralysed the accommodation so that the retinoscopy result can be absolutely relied upon. Suppose that by retinoscopy we infer that + 5 D. should be his correction for distance when under homatropine, we take off 0·5 D. for the homatropine, and order + 4·5 D. for each eye to be worn constantly. As before, we send the child to his medical man for treatment for his nebula. We cannot find what the correction is for his nebulous eye, and in the meantime it is best to order the same correction for it as the clear eye. When the nebula has cleared up this eye should be tested by retinoscopy under homatropine and the proper correction ordered for it. It is, however, most important in any case of converging squint to order convex glasses, if required, as early as possible, as by this means the squint is far more easily and speedily cured.

The literate children, those who can read, must not be treated in this summary way; they must be tested with test-types.

2. After noting their defects as discovered by the previous external examination, ask each child in the absence of those who have not yet been examined to read the last line of the test-types, which are placed at a distance of 6 metres or 20 feet, with each eye separately. If they can read this line satisfactorily with each eye note R. 6/6, L. 6/6 opposite their name, and they may be passed without further examination provided that you have heard no complaint of eyestrain or difficulty in seeing.

Perhaps I may be allowed to say a word about these visual tests. Here are a set of test-types. The theory of them is perfectly simple. The large letter at the top subtends an angle of 5′ at a distance of 60 metres—i.e., about 66 yards; the letters of the second line subtend the same angle at a distance of 36 metres. The letters of the fourth line subtend the same angle of 5′ at 18 metres, those of the sixth line at 9 metres, and those of the seventh line at 6 metres. Now standard vision may be regarded as that vision which will make it possible for a patient to recognise letters which subtend an angle of 5′.[2] If, then, Arthur Brown, say, with his right eye can read the seventh line at 6 metres, his right eye has standard vision, and we denote the result of our examination by 6/6. The numerator always means the distance at which the patient stands during the test, while the denominator always means the greatest distance at which a person of standard vision could stand, and still be able to read the specified line.

We will suppose that Thomas Anderson is unable to read the bottom line, then find out which line he can read with each eye separately. Suppose that with his right eye he can just read the sixth line, which he should have read at a distance of 9 metres, whereas he is really only 6 metres from the test-type. We note this result by the symbol 6/9—i.e., 6/9 of standard vision. Never simplify such fractions; do not, for instance, put down 2/3, the fraction 6/9 tells us directly that it is the result of an examination at 6 metres distance. Also never speak of normal vision; *standard* vision is not normal or average vision any more than 5 ft. 10 in. is a normal height, although it may be the standard height for certain occupations. Much confusion is occasioned in the law courts by speaking of 6/6 as normal vision, instead of standard vision.

But we must return to Thomas Anderson. Let us suppose that with his left eye Thomas Anderson can only read the second line; we note then L. 6/36, for at a distance of 6 metres he can only read what

[1] Being a paper read on Jan. 23rd, 1914, at one of the scientific meetings of the British Medical Association (Newcastle-upon-Tyne Division).

[2] Some letters are much easier to discern than others. In Snellen's test-types at its assigned distance each letter subtends an angle of 5′, while the characteristic, such as distinguishes G from C, subtends an angle of 1′, which is assumed to be the minimum visible.

he ought to be able to read at a distance of 36 metres.

3. Now repeat the test with the pinhole diaphragm. This is *the diagnostic test* of an error of refraction, though it is never mentioned in the ordinary books. I will pass round some lenses and pinholes for you to see for yourselves what a delightfully simple test it is. Put up one of the lenses before your eye so that some if not all of these test-type letters are blurred. Then hold the pinhole in front of the lens close to your eye, and at once you will be able to see much more clearly. This increase of definition is, of course, due to the fact that the pinhole diminishes the size of the circles of confusion on your retina, so that each point of the object is represented by a tiny circle on your retina, instead of being a big circle of confusion.

Hence whenever the visual acuteness of a person is increased by looking through a pinhole, it is absolutely certain that his defective sight is due in part, if not entirely, to an error of refraction. If the defective sight is not improved, or if the vision becomes less, it is certain that there is some other defect in the eye. It may be opacities in the media, choroiditis, choroidal atrophy, or something wrong with the optic nerve or with the brain, as in amblyopia.

Suppose that we find that our Thomas Anderson with the pinhole can read the seventh line—i.e., 6/6—with his right eye, but only the top letter with his left eye. From this we at once infer that Tommie has an error of refraction that must be corrected in his right eye, and that he has some disease or amblyopia in his left eye. As indicated by the symbol H, we remember that his teacher reported that he suffered from headache; we therefore ask the boy about this symptom. We may find that it is not really a headache but a pain in one or the other eye. Quite often the pain occurs in the eye with the better vision, apparently because it is the more used and strained, as it in that case always ceases when the correction is worn. Affections of the fundus in childhood rarely cause pain. It is always well to remember that the teacher's reports are only suggestive, they never warrant a diagnosis based on them alone.

Name.	Report		Observations.
A. R.	D, H,	.....	R. Neb. L. Neb.
R. D.	H.	.....	C.C.S. R. Neb. + 4·5 D. L. + 4.5 D.
T A.	H.	.....	R. 6/9, P. 6/6. L. 6/36, P. 6/60.
A. B.	—	.....	R. 6/6. L. 6/18, P. 6/6.

We then put homatropine into each of Tommie's eyes and get him to wait while we examine in the same way each of the other children on our list in turn. Suppose that the next child, Arthur Brown, after this examination has the following notes put after his name: "A. B.: R. 6/6; L. 6/18, P. 6/6." Most probably he will have no difficulty in seeing, and will have made no complaints of headache or eyestrain. Is there any necessity to order him glasses? I think there is for this reason, that if we do not he will use his left eye less and less until it becomes amblyopic. From the note with the pinhole diaphragm we infer that with an optical correction his left eye will now see perfectly, and therefore it is most important that during his school life he should be provided with this correction, as amblyopia develops almost entirely in early life. Later, his employment may necessitate his dispensing with glasses, but should an accident occur injuring his good eye, he will always be able to see perfectly with his left eye when furnished with the correction.

Always do your best to avoid the onset of amblyopia by encouraging the faulty eye to do its fair share of work.

Many children will be reported to you as being unable to see the blackboard, though they see well close at hand. Beware of assuming that all such children are myopic. Some of them will be found to suffer from the so-called "spasm of accommodation." This will at once be discovered on testing them under homatropine by retinoscopy, and they will be found to require convex glasses, if any at all. In the last case, if they are emmetropic, or if their error be only about + 1 D., do not order them any glasses, but give them gutt. atrop. ½ per cent. three times a day for three days, and allow them to stay from school for 10 days or so until the effects of the atropine are beginning to wear off.

Myopia.—In cases of genuine myopia, as found by retinoscopy, there are several points to be considered.

In slight cases, those of about − 2 D. or less, order the appropriate glasses to enable them to see the blackboard at school, but inform the parents that if there is no further increase of the myopia there will be no necessity for them to wear glasses when they grow up if their work is close—e.g., any work in the shops (such as that of a fitter) or in the mines or any office work, but that they will always require glasses for seeing at a distance. This is important for the parents to know, as myopes are unfitted for the army, navy, or mercantile marine, or any occupation in which distant vision without glasses is desirable.

In more advanced cases of myopia there is a great tendency for it to increase, so special instructions must be given to the parents and to their teachers. As the working distance of such patients is much too close their eyes are strongly converged and rotated downwards to see the book or work that is below them. Now, if we think of the muscles that are chiefly employed in depressing eyes that are already strongly converged we remember that they are the superior obliques. When this muscle contracts, especially if there is any synergic action of the inferior oblique, we see at once that the eyeball must be compressed laterally by these encircling muscles, which have no intracapsular ligaments to keep off injurious pressure from the eyeball. It is clear that this lateral pressure will tend to lengthen the eyeball, to make it the shape of a lemon, and hence to increase the myopia, to cause posterior staphyloma, and even retinal detachment. The necessary instructions immediately follow from this note on the pathology of myopia. The eyes must not be rotated downwards. The work should be raised nearly to the level of the eyes, the head being slightly inclined, and held as far off as convenient, at least 12 inches. Books should be placed on a suitable bookrest, or upon a high sloping desk on which all writing should be done. The illumination should come over the left shoulder so that the letters as they are written may be distinctly seen, and not fall in the shadow cast by the writing hand.

Many authorities habitually undercorrect myopia. I give the full correction under homatropine, unless

the myopia is extreme, above − 15 D., as I find that the effort to see distinctly with an undercorrection strains the eyes far more than when the full correction is given. I have never found any reason to alter my practice when sufficient care is taken to avoid the action of the superior oblique muscle.

I may as well now give general directions for the treatment of other forms of ametropia.

Hypermetropia.—Should the spectacles be worn constantly or only for near work? In the absence of squint, and when the vision is 6/6 without any symptoms of headache or eyestrain when viewing objects at a distance, do not insist on the glasses being worn constantly. With an error of + 3 D. or more they should be ordered to be worn at school and for all close work. But if the error be only about + 1 D. or + 1·5 D. do not order them. What is the use of ordering + 1 D. glasses to children who have about 15 dioptres of accommodation to compensate for such slight errors? However, remember that in a case of internal squint the correction if over + 1·5 D. must be worn constantly.

Astigmatism.—The whole of the astigmatism found by retinoscopy under homatropine should be corrected by appropriate cylinders, and if there are any symptoms whatever, whether defect of sight or headache or eyestrain, they should be worn constantly. If the astigmatism be oblique the correction is almost certain to be uncomfortable at first; if the discomfort continues for more than three weeks it is well to examine the patient again. It is very common for those who have worn an astigmatic correction for some time with comfort suddenly to complain of discomfort when using them. In such a case it will be nearly always found that the frames have got bent so that the setting of the axis of the cylinder is wrong. All that is necessary is to send the glasses to the optician to have the frames readjusted.

Anisometropia.—In this condition the refraction of the two eyes is different. There are three principal varieties—two logical divisions, the second being subdivided into two varieties: (1) Those who have binocular vision. (2) Those who have not binocular vision: (*a*) Those who use their eyes alternately. One eye is then generally slightly myopic, while the other is hypermetropic; such patients use one eye for close work and the other eye for distance. (*b*) Those who only use one eye, the other being amblyopic. This is the condition that is threatened by every case of squint, and every possible effort must be made to avoid it.

(1) In this class where binocular vision is present the difference of refraction will usually be small, and the full correction should be given to each eye, even if the difference should turn out to be as much as + 4 D. A fully corrected anisometrope may complain of some discomfort at first, which is due to the different prismatic action of the two lenses, when he turns his eyes in extreme directions. When he has learnt to move his head instead of his eyes the discomfort will disappear.

(2, *a*) Theoretically, of course, the correction should be given to each eye, and stereoscopic exercises enjoined so that he may obtain binocular vision. But, practically, these stereoscopic exercises have to be continued for such a long time that no child will have patience enough to persevere with them sufficiently to obtain any valuable result.

(2, *b*) Every effort must be made to regain the sight in an amblyopic eye, and the younger the child the speedier will be the recovery of its sight. The full correction for each eye should be worn constantly; and at meal times the better eye should be covered by a piece of paper or card to force the child to eat his meals with the feeble sight of his amblyopic eye. It is important that the exercise should not be too exhausting to the eye, and that it should be regular, frequent, and not too long continued. Precisely the same course should be followed in every case of squint. The straight eye should be covered up, and the squinting one forced to do all the seeing necessary at meal times.

Retinoscopy.—I do not attempt to explain the principles of retinoscopy to those who are not familiar with the method, but to those who do practise it I should like to give one or two hints that will be found to save time enormously.

1. If the red reflex from the fundus is dull, and if it moves only slowly on rotation of the mirror, the error must be considerable. Do not waste time by trying weak lenses; indeed, it may even be difficult to see which way the reflex moves; put in a + 7 D. at once and make another observation. If the reflex is still indistinct and the movement doubtful, substitute a − 7 D. for the convex glass you have put in, and the reflex will look brighter and the movements will be more rapid and easier to see, showing that you are nearing the correction.

2. One observation is enough if proper attention be paid to it. Do not go on wagging the mirror a dozen times, it wastes time. It is just like percussing a chest a dozen times over the same spot; no further information is gained after the first percussion if the observation is made with proper attention.

Newcastle-on-Tyne.

A CASE OF "SPASTIC" CONSTIPATION.

BY RICHARD GOMPERTZ, M.B., B.S. LOND.

THE patient, a man aged 39, has been under treatment at Duff House, Banff. Before admission he complained that for the last five years he had been increasingly troubled with constipation until his bowels never acted except under the influence of an aperient. One year ago he was examined by means of the X rays, and special attention was paid to the cæcum, about which it was thought that adhesions might exist, but nothing abnormal was found. The treatment then prescribed, and most carefully followed, consisted of massage to the abdomen, aperients, and a diet made up of foodstuffs such as porridge, brown bread, green vegetables, &c., which were chosen on account of the large amount of stimulating residue which they leave. His condition, however, failed to improve under this *régime*, and he was admitted to Duff House.

On arrival the patient complained of a feeling of fulness and discomfort in the region of the cæcum and ascending colon. He stated definitely that this sensation was aggravated by taking food, and was accompanied by irritability and depression. He had no gastric indigestion, and had never been troubled with feelings of weight or dragging at the back passage and had not suffered from piles. A motion was seldom produced by an enema, the rectum being usually empty.

A series of X ray photographs was taken by me in the X ray Department at Duff House, and it was found that the bismuth passed with normal, or even greater than normal, speed through the intestine

FIG. 1.

Twenty-four hours after bismuth meal.

FIG. 2.

Thirty-two hours after bismuth meal.

FIG. 3.

Forty-eight hours after bismuth meal.

FIG. 4.

Fifty-four hours after bismuth meal.

until it reached the splenic flexure. (Fig. 1, 24 hours after meal.) It was expected that the next stage would be the collection of a large mass of fæces in the pelvic colon and rectum, and that the case would prove to be one of common constipation of the usual form. The next photograph showed, however, a more interesting state; that portion of the bismuth which had reached the transverse colon had been rapidly transferred to the pelvic gut, as was expected, but the descending colon was now contracted and remained in this condition for a considerable time. Fig. 2, which shows this condition well, is reproduced from a photograph taken 32 hours after the meal; by comparing it with Fig. 1 it will be noted that the transverse colon is also contracted. Fig. 3 shows the condition 16 hours later; the transverse colon is admitting material, but the descending colon is still closed. The last photograph reproduced (Fig. 4) was taken 54 hours after the meal, and shows nearly all the bismuth in the descending colon or lower, but even at this time the spasm has not completely disappeared. It seems that this contracture would overtax the propulsive powers of the cæcum and ascending colon, and this idea is borne out both by the patient's sensations and by the unusual size of the cæcum.

In view of these X ray findings it appeared desirable to give a concentrated diet with little residue; to avoid entirely those aperients the action of which is largely to stimulate the large intestine, substituting for them belladonna; and to limit abdominal massage strictly to manipulations directed to empty the overloaded cæcum. Treatment was therefore begun on these lines and has met with success. A pill containing one-sixth of a grain of belladonna was given three times a day for the first few days; the feelings of discomfort vanished and normal motions were passed, the patient continuing to have daily evacuations with no medication whatever.

It is hardly surprising that the former X ray examination, at which bismuth was introduced by the mouth and rectum, led to no positive findings, for such a condition as is here described could only be recognised by means of a series of photographs.

For permission to publish this case I am indebted to Dr. E. I. Spriggs, the senior physician at Duff House.

Banff.

EXTRA-ARTICULAR ANKYLOSIS OF THE INFERIOR MAXILLA

DUE TO FOREIGN BODIES IN THE SCALP FOR TEN YEARS.

BY WILLIAM MACDONALD, M.B., C.M. ABERD., L.R.C.P. & S. EDIN.

THE peregrinations of foreign bodies are well known, and the case described below gives additional proof of Nature's untiring efforts to get rid of her enemies, though if unaided they may be futile. In the temporal region foreign bodies, such as a piece of wood, a sequestrum, or pus, may be equally disturbing influences, since they may travel downwards and forwards from the temporal fossa into the spheno-maxillary fissure and descend into the mouth, or downwards and backwards on to the temporo-maxillary joint. Again, a foreign body may travel downwards from the temple and become impacted behind the orbit. In this case grave mechanical interference was produced behind the orbit in front and the temporo-maxillary joint behind.

The patient, a man aged 25, consulted me on June 3rd, 1912, for a small swelling on the side of the right cheek in front of the ear above the zygoma. He gave the following history. When a schoolboy (September, 1902), engaged in erecting a goal-post, the transverse bar fell and struck him tangentially on the head at a spot near where the temporal crest crosses the coronal suture—the stephanion. He was rendered unconscious for perhaps a couple of minutes. On regaining consciousness he found a wound nearly a quarter of an inch long, and went to a cottage close by and had it bathed with cold water. On getting back to school a cold water compress was applied, and on the next day the wound was "sealed," as he termed it, with sticking plaster. The tissues in the vicinity of the wound, however, began to swell, and he had to stop work for a month, by the end of which time the swelling had extended from the side of the head on to the face so that his features were hardly recognisable on the right side. He was sent home, and there saw his medical man, who lanced the swelling and squeezed out "a quantity of semi-gelatinous red substance," which substance continued to ooze out for a few days until the wound closed and dressings were no longer required.

In September, 1903, he entered as an engineer apprentice, and in 1908 commenced his career at sea as an engineer. During these years he still had a swelling on the right temple which caused frequent locking of the jaw. This locking was so troublesome that once during his apprenticeship his medical man was called in, and he tried to overcome the locking by leverage with a cork. The locking of the jaw came on without warning and went away spontaneously. The pain was so severe that mastication and talking became very difficult. The condition would last one or two days and then pass off, but it was exceedingly inconvenient during his first voyage, as occasionally he could not eat.

In September, 1908, a surgeon was consulted and an exploratory operation was performed on the scalp over the temporal attachment by a semicircular incision between four and five inches long. An infinitesimal fragment, supposed to be steel, was found and removed. The swelling was not reduced nor did it subside. Electric massage, full strength, was tried, but as the patient suffered acute pain and mental depression this method of treatment was abandoned. Then his medical man tried counter-irritation. Iodine and blistering were used, but the condition was not improved, and the patient resumed his life at sea, plying for three years between Australia, New York, and the River Amazon.

When he came under my observation in June, 1912, there was a hard fusiform swelling occupying the right temporal region and a small fluctuating swelling over the centre of the upper margin of the zygomatic arch. Suspecting pus, I advised fomentations for three days to the fluctuating swelling, and on June 6th by a vertical incision removed a small quantity of pus, and on squeezing the sides of the wound removed seven small pieces of blackened wood like the graphite core of a cedar pencil; closely fitted together they measured 1¾ inches. The wound was packed with double cyanide gauze every two or three days, but would not close; a small sinus remained. Then there occurred marked difficulty in opening and closing the

jaw; the bite was only large enough to admit the tip of the little finger—a quarter of an inch. The movements of the jaw were performed largely by the muscles on the left side owing to interference with the action of the right temporal muscle, and the jaw got pushed over towards the right side. On July 29th, under chloroform, the sinus was opened up and an incision made upwards in front of the tragus. The parts behind the zygoma right down to the sigmoid fossa and backwards over the capsule of the temporo-maxillary joint were thoroughly explored and scraped with a small Volkmann's spoon, yet nothing beyond granulation tissue was found. The wound was again packed and dressed at intervals of a day or two; still the sinus remained.

The patient was very keen for another operation, but as the difficulty in opening and closing the jaw had somewhat diminished, and knowing that foreign bodies in the human organism are, like the proverbial needle in a haystack, hard to find, I was in no hurry, and resolved to wait, and simply had the wound dressed. On Oct. 2nd, under chloroform, another opening was made by a horizontal incision and a director introduced towards the external angular process of the frontal. The director was pushed backwards to the outer wall of the orbit and greater wing of the sphenoid. At a depth of 1½ inches a hard substance was felt and removed in six pieces; these when put together measured a linear inch and consisted of blackened wood similar to the pieces removed from the cheek, but in the size and shape of a charred lucifer match. The wound was packed with gauze and gradually healed in ten days. The swelling rapidly disappeared, and the patient could open his mouth an inch. When seen on Dec. 27th his bite was normal —i.e., 1½ inches. I have seen him frequently since, and he is perfectly well.

Liverpool.

A CASE OF INTUSSUSCEPTION TREATED BY ENTERECTOMY.

BY E. G. GAUNTLETT, M.B., B.S. LOND., F.R.C.S. ENG.,

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A BOY, aged 10 months, was admitted to Paddington Green Children's Hospital on March 17th, 1913, with a history of screaming attacks, associated with drawing up of the legs, which had commenced 36 hours previously. The child had vomited several times since the onset, and had passed a motion composed almost entirely of blood 24 hours previous to admission, since when nothing had been passed by the rectum. The child had been previously well, and was still being fed on the breast. On admission the temperature was 99° F., pulse 130, and respirations 32. The child looked well nourished, but pale and ill; he slept at intervals, but frequently awoke screaming. The abdomen was not distended and moved with respiration; when palpated the child screamed and contracted the abdominal muscles. On rectal examination nothing abnormal could be felt, but on withdrawing the finger a motion was passed which contained no obvious blood. On examination under an anæsthetic a sausage-shaped tumour was felt lying obliquely under the right costal margin.

The abdomen was thereupon opened through the right rectus muscle and an ileo-colic intussusception found, which extended for about 6 inches from the region of the ileo-cæcal valve. An attempt was made to reduce this in the usual way, but it was found that the last 2½ inches could not be reduced by squeezing or gentle traction. The bowel at this point was dark in colour and friable, so that even moderate pressure caused the cæcum to commence to split. Resection of the irreducible portion was then carried out by the method suggested by Mr. A. E. Barker—namely, a resection of the intussuscepted portion through an incision in the ensheathing layer.[1] Intestinal clamps were applied above and below the intussusception and the entering and ensheathing layers sutured by interrupted Lembert stitches around its neck. A longitudinal incision was then made in the ensheathing layer and the intussuscepted portion pulled through it; this was cut off at its base, and the cut edges of the entering and returning layers were sutured with interrupted catgut stitches. The incision in the ensheathing layer was closed by Czerny-Lembert stitches. The abdomen was then closed in the usual way. The anæsthetic used was a mixture of chloroform and ether, administered by the open method.

Subsequently the child was given four ounces of saline, containing 1 minim of adrenalin, subcutaneously every four hours, for 24 hours, together with strychnine in minim doses hypodermically and 10 minims of brandy by the mouth every four hours. Later digitalin in minim doses was substituted for the strychnine. An enema was given on the second day with a good result, and the bowels acted three times naturally on the third day. The stitches were removed from the abdominal incision on the tenth day, healing being by first intention. The temperature rose after the operation, reaching 104° on the third day, but returned to normal on the seventh day. The child went home well on March 31st.

I should like to acknowledge my thanks to Mr. J. Renfrew White for his after-care of the case, and to Dr. Hugh Paterson for very skilfully administering the anæsthetic.

Queen Anne-street, W.

MULTIPLE MESENTERIC LIPOMATA CAUSING OBSTRUCTION.

BY SPENCER MORT, M.D., CH.B. GLASG., F.R.C.S. EDIN., F.R.S.E.,

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LIPOMATOUS tumours are found in all tissues and organs where fat lobules are normally situated. The commoner positions of these tumours, as on the limbs or trunk, are well known, as also the fact that they may be present in localised or circumscribed masses, or less often as diffuse infiltrations. Apart also from actual tumour formation, it is common to find the storage of fat in the thoracic and abdominal walls, with an additional reserve in large masses in the subperitoneal and retroperitoneal tissues, and especially in the great omentum, producing great difficulties in locomotion, and mechanically impeding the physiological action of the involved or adjacent organs.

I had occasion recently to operate on a patient suffering from intestinal obstruction, due directly

[1] THE LANCET, May 9th, 1903, p. 129

to fatty change near the intestine, the mesentery of which was thickened and solidified by the addition of fat between its peritoneal layers, while the lumen was directly compressed from without by a rounded tumour of a similar nature.

The patient, aged 60, was a corpulent old lady, the mother of eight children, whose life had been surgically uneventful till about one year before operation. She had a popliteal lipoma on the back of the right knee, and a fibroid mass on the left cheek, just in front of the ear. A gradual and progressive swelling of the abdomen was noted, at first without other symptoms than its growth, but later signs of interference by pressure on the viscera appeared. These were: a feeling of fulness after food, dyspepsia, sickness, vomiting, constipation, occasional sudden distension of the abdomen relieved usually by the passage of flatus in quantity, and rarely diarrhœa. Progressive development of this condition led to a state of chronic intestinal obstruction. Locally, there was an indefinite abdominal swelling, without the usual flabbiness associated with simple pendulous belly, and a provisional diagnosis of chronic obstruction of unknown cause was made. The age of the patient, the history, and a pallor of the face suggested carcinoma, but a complete vaginal and rectal examination did not confirm this, while there was also a lack of emaciation.

On Jan. 13th, 1914, I opened the abdomen in the middle line between the umbilicus and pubis, cutting through 2½ inches of oleaginous superficial fat. The great omentum was of the stiffness of cardboard, largely interladen with lobulated fat of 1½ inches in sectional thickness. The rigidity of the parts and the depth of the wound made a larger incision necessary, so the latter was extended above till the abdominal contents were freely exposed. The small intestines were attenuated and collapsed, their walls thrown into rugæ in many places. The mesentery was curiously packed with fat of a much denser nature than that found in the parietes, so that surgical manipulations were interfered with, and the free intestinal borders of the mesentery supported the intestine in an erect starched-like manner, holding it out in a fashion resembling an Elizabethan ruffle, which must have considerably lessened normal peristalsis. Many little tumours of the size of beans were studded in the mesentery, and one larger tumour, as big as a pigeon's egg, situated 9 inches from the ileo-cæcal valve, pressed on the ileum, and seriously diminished its calibre. (Fig. 1.) This

FIG. 1.

Lipoma pressing on the ileum, causing obstruction. Photograph of excised tumour with inch scale for comparison of size.

was easily shelled out after incising its peritoneal case, and the intestine thereupon resumed its natural size. The other abdominal organs were turned out by evisceration, and the fatty tags of the sigmoid and descending colon were found to be much enlarged, hanging on to the bowel like marbles, but evidently not interfering with the passage of the contents. The ascending colon was hitched up by a small perivisceral veil attached to the omentum, possibly of a congenital nature. There were no other lesions. There were thus two effects limiting due passage of the intestinal contents, both depending on the abnormal development of fat—namely, a resistant mesenteric attachment of the small intestine of a diffuse nature, and a localised obstruction due to a circumscribed hypertrophy. (Fig. 2.)

After saline lavage of the peritoneum the abdominal wall was closed by sutures in layers, reinforced by two large relaxation stitches of thick silk, as the contained viscera were rather tightly packed. Recovery was splendid. The symptoms of obstruction abated with the removal of the tumour, the more obvious impediment to free transit of intestinal material. An enema was given on the third day with good result, and repeated every second day for a week.

FIG. 2.

Diagram of obstruction of ileum by tumour.

Five days after operation cascara extract was given, and the nurse in charge reported that it was followed by a good natural motion, contrasting with the condition before operation when four or five repeated doses of the same drug were required to produce any purgative action. The wound was looked at after ten days and a sound linear scar, 7 inches in length, was seen. Recognising the diffusely thickened condition of the mesentery and its effect in diminishing proper vermicular action, pituitrin (P.D. and Co.) in ½ c.c. ampoules was prescribed, this acting favourably in minimising stasis.

With a view to diminishing the general adipose state I intend giving extract of thyroid gland, the effect to be checked by the rate of the pulse, the weight, and the intestinal symptoms. This may lessen the diffuse fatty hypertrophy of the mesentery. I do not know what effect it has on definite circumscribed lipomata, but will note later if there is any apparent benefit, taking the external popliteal lipoma as a visible experimental control. Probably massage of the abdomen with a heavy ball (cannon-ball exercise) will be resorted to in order to diminish the fat, as well as to act mechanically on the muscular wall of the intestines.

I am unable to find a recorded case of a similar nature in the literature. Bland-Sutton[1] describes the ordinary varieties of lipoma, and among special forms mentions tags of subperitoneal fat descending through the inguinal or femoral rings, fatty hernia of the linea alba at the umbilicus, lipoma of the mesometrium (cases noted by Treves[2] and Parona[3]), over-development of the appendices epiploicæ, and subserous intestinal lipoma. The last-named variety is indeed very rare, but presents the most resemblance to the condition in my case.

Stabb,[4] Lawford Knaggs,[5] Langemak,[6] Hahn,[7] and Hiller[8] have collected a limited number of cases of subserous lipoma, most of which were noted as causing intussusception, none of them leading directly to intestinal obstruction, while Nothnagel,[9] and Mikulicz and Kausch[10] merely refer to the condition as having been seen. A case of obstruction from a like tumour of the great intestine is reported by Bland-Sutton,[11] a lipoma of the ascending colon situated 2 inches from the ileo-cæcal valve. Therefore, it appears that the present case is unique in being the only one in which a mesenteric lipoma of the small intestine has caused danger to life by pressing on, and obstructing, the ileum.

In the diagnosis of this condition laparotomy is the only sure means of clearing up doubt, though some other evidences may be considered in a suspected case. There will be no local signs of a carcinomatous nature on abdominal palpation or on rectal or vaginal examination, no glandular or metastatic involvement, and no emaciation, but rather obesity, unless chronic stasis causes auto-intoxication or starvation. The onset will be very slow, for lipoma as a rule is one of the most tardy of neoplasms in developing, so the obstructive phenomena with periods of acute distress may be delayed and gradual. The age of development of this condition is indefinite, though it is not usual till middle life is reached.

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Upper Edmonton, N.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.

A MEETING of this section was held on Jan. 23rd, Dr. LEONARD GUTHRIE, the President, being in the chair. The following cases and specimens were shown:—

Dr. T. R. WHIPHAM: A case of Kala-azar in a boy aged 5 years. His father contracted kala-azar in Calcutta a year ago and died recently from that disease. In March, 1913, when in Calcutta, the boy was taken ill with fever and loss of appetite. The motions at that time were white but otherwise normal. The abdomen was enlarged when he arrived in England in June, since when he had lost weight and the size of the abdomen had increased. The child was wasted, especially in the limbs and chest; the cervical, axillary, and inguinal glands were enlarged. The abdomen measured 24½ inches in circumference; the liver extended 3 inches below the costal margin; the spleen was enormous, extending to the middle line and filling the left iliac fossa. Blood count: Red cells, 3,220,000 per c.mm.; white cells, 2200; polymorphonuclears, 46 per cent.; lymphocytes, 38 per cent.; large mononuclears, 12 per cent.; transitionals, 4 per cent; hæmoglobin, 66 per cent. The coagulation time was diminished, being 12 minutes. Leishman-Donovan bodies were present in blood obtained by puncture of the liver.

Dr. WHIPHAM also showed a case of Athethoid Movements in a girl aged 4½ years. The movements, which were present in either hand, consisted of alternate pronation and supination, which became more marked when objects were grasped. The condition was probably due to injury at the time of birth.

Dr. F. LANGMEAD showed a case of Malaria in a girl aged 3½ years. The disease, which commenced in September, 1913, was typical and accompanied by rigors. The mother had malaria while the child was being breast fed. The spleen extended downwards for four finger-breadths below the costal margin, and the liver was also slightly enlarged. Examination of the blood showed benign tertiary parasites in fair numbers, large intracorpuscular forms being seen.

Dr. ERIC PRITCHARD showed a case of Abnormal Cysts on the Shoulders in a baby 6 weeks old. The two cystic swellings were noticed immediately after birth. The presentation is said to have been that of a shoulder (left). The swellings appear to be of the nature of abnormal and persistent capita succedanea.

Dr. J. W. CARR showed a case of (?) Polio-encephalitis. The patient, a boy aged 7 years, had an attack of diarrhœa with severe headache and pains in the limbs in October, 1913. He became unable to stand or speak and also appeared to be blind. On admission in December he could not stand alone and could see only imperfectly, and there was a considerable degree of mental deficiency. The optic discs showed evidence of a subsiding neuritis. After five weeks he began to improve as regards mental condition, sight, and movement, though he still had an ataxic gait. Wassermann's reaction was negative.

Dr. F. G. CROOKSHANK showed a case of Deficiency of Endocrinic Glandular Secretion. The patient, a boy aged 32 months, did not speak and was apathetic and flaccid. Some of the features were suggestive of Mongolism. It was thought that the child had in addition to some degree of Mongolism some pituitary deficiency.

Dr. H. D. ROLLESTON and Mr. E. J. BOYD showed a case of Lymphatic Leukæmia under treatment by Benzole. A boy, aged 6½ years, developed enlargement of the cervical glands after measles and pneumonia. Subsequently the axillary, inguinal, and submaxillary glands also enlarged and the spleen was palpable. In December the leucocytes were 60,000; large lymphocytes, 54 per cent.; small, 16·5 per cent.; and polymorphonuclears, 25 per cent. He was treated with benzole, at first two minims, and later three minims, three times a day. On Jan. 13th the leucocytes were 16,000; large lymphocytes, 41·5 per cent.; small, 46 per cent.; and polymorphonuclears, 10 per cent.

Mr. PHILIP TURNER showed a case of a Dental Cyst following Fracture of an Incisor Tooth in a boy aged 12 years. The right central incisor was fractured as the result of a fall two years ago. Swelling of the jaw was noticed three months ago. There was now bulging forward of the facial aspect of the superior maxilla, depression of the palate on the right side, and widening of the alveolar process. A radiogram showed that the pulp cavity of the fractured tooth was exposed, and that the open apex led directly to the cyst.

Mr. L. E. C. NORBURY showed a girl, aged 5½ years, with Deformity of the Spine of (?) congenital origin. There was a prominence of the last dorsal and the first lumbar spinous processes. There was slight mid-dorsal lateral curvature with convexity to the left. There was no pain or rigidity. X ray examination showed a wedge-shaped condition of the first and second lumbar vertebræ. The von Pirquet reaction was slightly positive.

Dr. PRITCHARD showed a specimen of Double Hydro-Ureter (congenital) in an infant, aged 7 months, who was admitted for diarrhœa and vomiting. The bladder was not distended, but two cystic swellings could be felt internal to the anterior superior iliac spines. The obstruction appeared to have been due to valve-like pressure of the dilated ureters, the primary dilatation being probably due to congenital atresia of the ureteral orifices. The renal pelves were greatly enlarged.

Dr. J. PORTER PARKINSON showed specimens from an unusual case of Jaundice which he considered to have been acute yellow atrophy of prolonged duration. The illness commenced with a rigor. Three weeks later jaundice appeared. The liver was then enlarged but subsequently diminished until death. No leucin or tyrosin was detected in the urine.

The PRESIDENT and Dr. G. A SUTHERLAND made a communication on two cases of Transitory Diabetes Insipidus. The first case was a boy, aged 2½ years, in whom the disease lasted about six weeks. He took 12 pints of water a day, and the urine which contained no albumin or sugar was of specific gravity 1004. There was some diarrhœa and the motions were of a peculiar bluish-grey colour. In the second case, a boy aged two years, the duration was about five weeks. The main symptoms were thirst, drowsiness, and polyuria. There was diarrhœa and the motions were loose, putty-coloured, and offensive. The liver and spleen were enlarged. A possible explanation is that the intestinal derangement set up toxæmia, which acting on the kidneys prevented the output of waste products. Another explanation is that the symptoms were due to toxæmic affection of the vaso-motor centres and sympathetic system, or perhaps of the pituitary body.

SECTION OF OPHTHALMOLOGY.

Exhibition of Cases.—The Use of Salvarsan in Ophthalmic Practice.

A MEETING of this section was held on Feb. 4th under the presidency of Sir ANDERSON CRITCHETT.

Dr. FRANK MOXON showed cases of Congenital Diffuse Opacity of the Cornea in two sisters. The children and the family had been healthy; there was no history of syphilis, tubercle, or miscarriages. One of the children was ill with sickness and diarrhœa at a year old. Both Wassermann and von Pirquet reactions were negative. There was slight photophobia, but the fields of vision appeared to be normal. The cornea was milky, but there was a fairly good fundus reflex. The opaque spots were fairly evenly distributed throughout the thickness of the cornea. Lenses and vitreous were clear.—Mr. J. H. FISHER considered that the tension in all four eyes was somewhat raised, and that there was a possibility of it being a variant of congenital glaucoma. The changes were mainly in the epithelium.

Mr. ANGUS MACNAB showed a case of Nodular Opacity of the Cornea, which he considered bore a relation to Dr. Moxon's cases. In a similar one, shown before the Ophthalmological Society, the epithelium over the nodules was somewhat heaped up. At the extreme periphery of the cornea there were loops of vessels which passed into the cornea, and that seemed to be slightly so in Dr. Moxon's cases.

Mr. J. B. LAWFORD showed a case of Brawny Soleritis. The etiology, as in all these cases, was obscure. It was an inflammatory process, with much infiltration by cells; there was nothing to suggest new growth. Every test applied to the case had turned out to be negative.

Mr. W. J. INMAN showed, through Mr. LESLIE J. PATON, a case of Irido-cyclitis in a boy who had been living in Africa, and was now suffering from typanosomiasis Gambiensi. Last October his left eye became inflamed, and three weeks ago its fellow behaved similarly. Mr. Inman had the Wassermann reaction taken, and it was positive; but the Wassermann reaction was positive in the disease afflicting the patient. There was a beautifully marked circinate rash on the front of the thigh, and enlarged soft posterior cervical glands, from which, failing it being found in the blood, the trypanosome could generally be recovered. The Rhodesian form of the disease seemed to be more severe than the Gambian. Dr. Daniel, whom he consulted about the case, said he would rather treat such a one with repeated small doses of atoxyl than with salvarsan.—Mr. E. TREACHER COLLINS referred to a case of sleeping sickness which he saw with Sir Patrick Manson, and described the appearances. Eye diseases seemed to be very uncommon in connexion with sleeping sickness.

Mr. ORMOND showed a Case for Diagnosis, and Dr. A. L. WHITEHEAD (Leeds) discussed it.

Mr. CUNNINGHAM showed a case of Massive Exudate in the Retina.

Mr. W. LANG then introduced a discussion on the Use of Salvarsan in Ophthalmic Practice. He reviewed the knowledge up to date, and discussed the probable mode of action of salvarsan. During the early stages of syphilis, before the spirochætæ had reached the avascular tissues, salvarsan acted readily and quickly, but later it was less efficacious, though gummata of iris, sclerotic and ciliary body seemed to be favourably influenced by the treatment. With regard to parasyphilitic diseases the Argyll Robertson pupil had once been known to react again to light following intravenous injections of "606." Ophthalmoplegia externa and primary optic atrophy had not been definitely improved by the treatment. After injecting a large dose of salvarsan into a rabbit's vein none of it was found in the cornea, though specially searched for. The usual dose of salvarsan for the adult male was 0·6 gramme, and for the adult female 0·5 gramme; while if neosalvarsan were used the dose must be 50 per cent. more. The destruction of the parasites should be effected as soon as possible, before they had the opportunity of becoming immune to the drug. He instanced cases in which greatly increased doses with that object had been efficacious. Thanks largely to Mr. Browning, salvarsan was now known to be a successful treatment for sympathetic ophthalmia, and studies on the blood condition enabled one to foresee the onset of the condition.—Lieutenant-Colonel T. W. GIBBARD, R.A.M.C., said that although salvarsan had not supplanted mercury its action was more rapid and intense, and he narrated some striking cases illustrating this fact. Secondary lesions seemed to be more intractable than primary, and relapses were more frequent. The feature of secondary cases was the tendency to affections of the central nervous system, which was more often involved than was formerly supposed. He did not believe this was due to salvarsan; cases were heard of more because everyone was on the look out for untoward symptoms following the use of the new drug salvarsan. He knew of only two cases of cerebral nerve disturbance in 1200 cases in which the drug was used. And where this did occur an increased dosage caused a disappearance of the trouble. Syphilitic meningitis was more prone to relapses because of the inaccessibility of the subarachnoid space. Having killed off the main army of the organisms it seemed necessary to keep in the blood a remedy which would deal with scattered survivors. At his headquarters they had given 4000 intravenous injections, and the soldier concerned was followed up wherever he went.—Mr. S. H. BROWNING read an interesting paper in which he detailed his cytological studies and the reasoning which led him to suggest giving salvarsan for sympathetic ophthalmitis. He had had excellent results in syphilis from salvarsan given per rectum; that the drug was absorbed when so given was proved by the occurrence of an arsenical rash following the method. Out of 500 to 600 cases he had not heard of a single instance of ocular palsy, optic neuritis, or other similar trouble. The most successful results from the method were in syphilitic iritis; gummata of the sclera also vanished in a marvellous manner under salvarsan and potassium iodide. He agreed with the general opinion that in interstitial keratitis it was not much good, though there had been one or two notable exceptions. His usual method was to give the drug intravenously. Neosalvarsan was more toxic than salvarsan.

The debate will be continued at a special meeting of the section.

SECTION OF PSYCHIATRY.

The Influence of Toxins on the Central Nervous System.—The Importance of Disturbance of Personality in Mental Disorders.—Exhibition of Specimens.

A MEETING of this section was held on Jan. 27th, Sir GEORGE SAVAGE, the President, being in the chair.

Dr. DAVID ORR and Dr. R. G. ROWS communicated a paper entitled "Further Observations on the Influence of Toxins on the Central Nervous System." Experiment showed, they said, that toxins travelled upwards readily in the perineural lymphatics, and the irritation was continued in the central nervous system if the toxins succeeded in gaining that level. Continuity of extension was an important feature, and was as constant in the central as in the peripheral nervous system. The lymphogenous infiltration was characterised, firstly, by reaction of cells of the fixed connective tissues; secondly, by proliferation of the cells of the adventitial sheath of veins and capillaries; thirdly, by the appearance of scavenger cells in the cord when the myelin was disintegrated; and, fourthly, nerve cell degeneration. The proliferation of adventitial cells was like the periarteritis in general paralysis of the insane and some other conditions. They had found that the lymph path of the nerves was an important mechanism in brain and cord infection and probably general paralysis and tabes were lymphogenous infections. Another mode of infection of the central nervous system was by the blood stream, and over and above the deleterious influence on nerve tissue of organisms and toxins one had to remember the effects of products of altered metabolism, and the influence of hyper- and hypo-secretion of the ductless glands. In the present series of experiments the authors had commenced a study of the effects of bacterial intoxication on the spinal cord, and had chosen the abdominal cavity as the site of the experiments. The reasons for this were multiple: (1) this site was most suitable for experiment in which one wished to exclude infection of the lymph system of the spinal nerves; (2) in order to reproduce, as closely as possible, gastro-intestinal intoxication, and observe the effects on the spinal cord; and (3) to ascertain how far such toxic infection affected the

sympathetic ganglion chain. The method of inducing the toxæmia had been uniform in all the animals: celloidin capsules containing a culture of the staphylococcus pyogenes aureus were placed in the abdomen attached to various organs—the mesentery, kidney, bladder, and lower part of the stomach. Ten rabbits and one dog were used. At the post-mortem examination the capsules were found surrounded by an accumulation of inflammatory cells, and the mesentery, stomach, and small and large intestines were all congested. The inflammatory reaction extended from the neighbourhood of the capsules a considerable distance along the mesentery, and there was abundance of evidence of reaction in connexion with the sympathetic ganglia. The vessels passing into the ganglion substance showed proliferative changes in the ganglion sheath. Some of the sympathetic ganglia were surrounded by masses of degenerate polymorphonuclear cells, by cells of the lymphocyte type, and fibroblasts. The vessels passing into the ganglion substance showed proliferative changes in the adventitial sheath. Within the ganglia there was chromatolysis of the nerve cells. Much of the chromatophile material had disappeared from the centre of the cell, and the nucleus was displaced to the periphery. The spinal cords were fixed in formalin and bichromate of potassium, and pieces from all regions were cut in longitudinal and transverse sections. No evidence of lymphogenous invasion was found in the sheath of the spinal ganglia, the perineurium of the spinal roots, or in either the dura mater or pia arachnoid. But within the cord the picture presented a remarkable difference, and the proliferation of the glial elements was very noticeable. It affected both white and grey matter, but mostly the outer layers of the latter. Many amœboid neuroglia cells were clustered round the veins and capillaries of the white matter. There were also scattered sclerotic foci, consisting of glial elements in the resting stage following proliferation. There was absence of sclerosis in any of the tracts of the cord, but there was considerable fragmentation, the appearance resembling that in the cord œdema of cancer cachexia and pernicious anæmia. The changes in the vessels varied much; where intense toxicity was induced the changes in the vessels were the most prominent morbid phenomenon in the cord. Many of the vessels contained hyaline thrombi. The authors thought there must be a factor at work besides general intoxication and invoked a disturbance of the sympathetic influence on the cord vessels.—Dr. F. W. MOTT considered that the experiments were of great value and had been conducted with much care, though he was not inclined to accept all the conclusions in the paper. The effect of a poison was different according to whether it operated through the lymphatic stream or through the blood stream. The lesion shown by micro-photograph in the cord reminded one very much of that of combined sclerosis, and in pernicious anæmia there was œdema of the cord. There was no proof of a sympathetic affection, and one would have expected changes in the pupils. The fact that the changes were much more marked when the toxin travelled up the posterior spinal lymphatics was of great interest to him in connexion with the causation of tabes dorsalis. In this latter disease one usually found in the aorta evidence of syphilitic lesions, and he thought it possible that toxins might pass up by the lymphatics along the blood vessels, and so get into the posterior columns of the cord, and produce the degenerative changes which were characteristic of the disease. But the Argyll-Robertson pupil was difficult to account for by a theory of that kind. The present experiment supported the original doctrine that tabes was a syphilosis affecting the posterior lymphatic system of the spinal cord. There was no degeneration of those segments of the cord supplying the pre-axial border of the limb, and there must be an anatomical reason for that. The reason the frontal lobes of the brain were first and most seriously affected in general paralysis seemed also to depend on some anatomical reason; the frontal lobes were supplied by veins in which the blood ran against gravity, and opened into the longitudinal sinus in a direction opposite to the current, so there would be a tendency to congestive stasis. If the spirochætæ were anaerobic organisms the conditions were such as to favour the development of the disease in that region first.—Dr. F. E. BATTEN remarked that the changes described in this communication were strikingly like those in subacute combined degeneration of the cord. He would like to hear more fully what the authors meant by hyaline thrombosis, for such a staining occurred in subacute combined sclerosis. Did it mean that the vessels were definitely thrombosed?—Dr. ORR replied that what was seen was degenerated myeline in the posterior median septum, immediately surrounding the vessels; the hyaline seemed to be lying free in the lymph spaces. Some vessels contained a plug, but were not thrombosed from end to end.

Dr. ROWS read a paper entitled "The Importance of Disturbance of Personality in Mental Disorders." Disorders of the mind were now, he said, considered from a broader point of view; it was now no longer thought sufficient to enumerate the psychic symptoms and label the case accordingly; to say that a case was an atypical case of disease was equivalent to saying some factor had escaped notice or could not be explained. The psychogenic as well as the pathogenic etiology must receive attention. The bodily and nervous symptoms might be as much a part of the illness as were the psychic; in fact, these latter were often merely a symbol expressing some change in the function of an organ outside the brain. The paper was based upon two striking cases in women whose morbid mentality, originating in a grave shock caused by loss of a close friend, was set out in great detail and analysed with great care. The loss of mental balance was largely shown by strong alternations between religious intensity and erotic sensations, and there were periods of apparent detachment of personality, so that one of the patients declared that part of her own self reposed on the pillow beside her. The mental development of these women was, in Dr. Rows' opinion, influenced largely by the strongest of the instincts, and Dupré had adduced much evidence in support of the view that perversion of the instincts lay at the bottom of many of the anomalies of mental development, and considered that practically the whole of our mental activity might be affected by these disturbances of the instincts. Juliusburger suggested that psycho-analysis would show that the source of the disturbance of the organ-sensations must be sought in a disturbance of the psycho-sexual constitution and organ-sensations were a most important constituent of sexuality. One patient said that her attacks of giddiness, in which she said she felt justified in doing anything to relieve the tension, occurred most frequently after her thoughts had been running on sexual matters. Dr. Rows showed that anything which disturbed the affective tone of sensations, by toxic action or otherwise, would interfere with the psychic functions, and hence a morbid affectivity might be produced. Head's work on certain mental changes that accompany visceral disease bore upon this, and Dr. Rows and Dr. Orr had shown that similar morbid effects might occur in the brain, the vessels of which were provided with vaso-motor fibres, and were thus under the control of the sympathetic system. It seemed clear that primary lesions of the sympathetic system might disturb the organ sensations and also the dynamic processes in the central nervous system, and so play an important rôle in producing those mental disorders in which a change of the personality was a prominent symptom.

Mr. J. E. R. MCDONAGH showed some microscopic specimens demonstrating the Leucocytozoon Syphilidis in the Brain of Cases of General Paralysis of the Insane. So far six brains had been examined, in five of which the phases had been found. The exhibitor considered that these phases were more easily to be demonstrated than the spirochæta pallida. These changes were to be found in the pia mater and in the walls of the blood-vessels which extended from the pia into the cortex. But the spirochæta pallida had not any regular distribution. Since the other phases were mainly to be found in the walls of the vessels and in those which had their origin in the meninges, it was reasonable to suppose that general paralysis of the insane was caused not by direct extension along the lymphatic sheath, but by extension from the pia mater.

SECTION OF BALNEOLOGY AND CLIMATOLOGY.

London as a Health Resort.

A MEETING of this section was held on Jan. 29th, Dr. F. A. MOUILLOT, the President, being in the chair.

Dr. S. D. CLIPPINGDALE read a paper on London as a Health Resort. The paper was in two parts, the first

proclaiming the salubrity of London and the second indicating the suitability of London for certain cases of a psychopathic or neuropathic character. In the first part Dr. Clippingdale traced the history of efforts to improve the sanitation of the city from the twelfth century, and showed how the autocratic monarchs by a mere Order in Council achieved more by a little stroke of the pen than the legislature in these democratic days could achieve in months or years. He instanced Henry VIII.'s orders as to slaughter-houses being external to the city walls, the exhibition of a white wand outside the house of every person suffering from an infectious disease, and the burning of the clothes worn by the patient in the nearest field. He also instanced Queen Elizabeth's order that no house should contain more than one family, and that no more houses should be built within three miles of the city. In the second part of the paper the claim was made that the diversions of London were a very suitable cure for maladies of a neurasthenic or psychasthenic nature; that to send such patients into a home for special treatment was accepting the patient's own theory that he was the subject of actual disease and treating one imposition by another. What such patients wanted was absorption of their excessive cerebration, and the rational way of doing this was not by "rest cure," but by such exhilaration as was provided by the great metropolis.

Dr. SEPTIMUS SUNDERLAND said he had frequently noticed that a short sojourn in London, with its myriad attractions, was of immense value to country dwellers suffering from various chronic maladies which depress their vitality and spirits. London could be considered a health resort also in another sense for some of these country patients, because nearly every equipment useful in the treatment of chronic diseases and ailments could be found there. On their return to their country houses such patients indicated often retained pleasing recollections of their stay in town, and were furnished with subjects for conversation that diverted their thoughts, and kept them for a time from brooding over their ailments, thus materially assisting to ameliorate their mental attitude and outlook on life, whilst their bodily condition also might have been improved by treatment undergone. He referred to the difference from a climatic point of view of the various localities in and around London, and mentioned the numerous spas, wells, and bathing establishments which had flourished in the town and its environs in the seventeenth, eighteenth, and early part of the nineteenth centuries.

Dr. PERCY LEWIS said the properties of London as a health resort were founded on a fallacy. In the poorer parts it was impossible to find a family which had resided there for three generations. Also the low death-rate was due to rich persons going into the country, where they swelled the local death-rate and proportionately reduced the apparent death-rate of London. This information was to be found in a paper published by Dr. William Freeman of Andover, who spent much time and energy in collecting these facts.

Dr. FORTESCUE FOX said that Luke Howard, the father of modern meteorology, pointed out a hundred years ago in his classical work, "The Climate of London," that its peculiar variability was due to an alternate participation in the "polar and tropical atmospheres," and that this variability had great advantages to health and some dangers. Although exposed to more sudden changes of temperature the English did not clothe so warmly as more northern nations. The three essential elements in a health resort were climate, a mental element (change of scene and recreation), and some hydrological or other symptomatic treatment for chronic affections. It was unscientific and untrue for the climatologist, the hydrologist, or the mental therapist to say to the others, "I have no need of thee." United they stood, divided they fell. It was to be hoped that one day London also, like other cities, would be provided with adequate medical baths, where modern hydrotherapy would be both given and taught under medical direction.

Dr. L. C. E. CALTHROP thanked Dr. Clippingdale for his instructive and entertaining paper. Dr. Clippingdale had incidentally mentioned the beneficial effect of London air in cases of asthma; a case had come under his own notice which had found most relief from his asthmatic attacks when travelling on the old underground railway between Baker-street and King's Cross, which was noted for its bad ventilation. Dr. Sunderland had enumerated several interesting old wells and springs of London, but had not mentioned the fact that there existed in a little court off the Strand leading to the Savoy Chapel an old Roman bath, and recently in the City near the Tower in examining the foundations of a building which had been pulled down evidences of another Roman bath were discovered, as reported in the *Times*, showing that the Romans had probably been the earliest to establish baths in London.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.—Roentgen Ray and Bismuth-Meal Method as an Aid in the Diagnosis of Some Alimentary Diseases.—Diffuse Scleroderma.

A MEETING of this society was held on Feb. 4th, Dr. G. H. MELVILLE DUNLOP, Vice-President, being in the chair.

Dr. GEORGE MACKAY showed:—1. A case of Congenital Cataract in a child aged 14 months, which illustrated an unusual rapidity of absorption of lens matter after needling. It was necessary to render the lens transparent at as early an age as possible, because the faculty of using the eye commenced during the first few weeks of life. The needling took place when the child was about 7 months old. The case further illustrated tuberculosis in a bottle-fed baby, and right facial paralysis which ensued after operation on the mastoid and cervical glands. 2. The case of a man which illustrated Trephining for Glaucoma combined with Peripheral Iridectomy. Formerly when iridectomy was performed for this disease many cases failed. Dr. Argyll Robertson was the first who used trephining of the sclerotic with the object of obtaining a permanent safety valve, but the effect of this operation was only temporary. Five years ago he was told by Dr. A. Freeland Fergus, of Glasgow, that he was operating by trephining at the corneo-sclerotic junction, and since then he (Dr. Mackay) had performed the operation frequently with very beneficial results.

Dr. EDMUND F. T. PRICE made a communication on the Roentgen Ray and Bismuth-Meal Method as an Aid in the Diagnosis of Some Alimentary Diseases, and illustrated it with many beautiful lantern slides. He confined himself to the consideration of some of the conditions in the large intestine in which radiography proved useful. The X ray and opaque meal was only one of many means for arriving at a correct diagnosis in some alimentary diseases. He thought that its most brilliant achievement lay rather in the direction of confirming conclusions already arrived at by other and better known methods than in that of making independent discoveries, and that the nearer they approached to perfection with their skiagrams the greater was the necessity for a thorough clinical examination. Whilst this was his belief, there were few cases in which radiography could not give some help, and in cases of intestinal stasis and allied conditions its aid was indispensable. They could not forget that but for the work of Dr. A. C. Jordan, Sir Arbuthnot Lane could not have opened up the new field of surgery with which his name was associated, and that nearly everything worth knowing about the normal intestine had been taught by another great radiographer, Hertz. He admitted that mistakes had been made in diagnosis by the X rays, but the reason was that they were not familiar with the normal radiographical appearances of the alimentary tract. Then they were apt to ignore or to pass over as of no account clinical facts discovered by other methods, and to depend entirely on the radiograms, and, lastly, they were not alive to the importance of examining the whole alimentary tract. As regarded technique, he always endeavoured to be allowed to make a complete examination, and remembering that the bismuth meal was one thing and an ordinary meal another, he tried to make the meal as palatable as possible. He found that bread and milk had proved most acceptable to his patients. The entire meal consisted of 2½ ounces of bismuth oxychloride or Merck's barium sulphate, 2½ ounces of breadcrumb, about 6 ounces of hot milk, and a little sugar. After the meal was finished the patient undressed; the time thus

occupied allowed the meal to settle in the stomach and separate itself from the gases always present. He then placed an opaque disc over the umbilicus and made his first screen examination and then exposed a plate. All examinations were made with the patient in the upright position. That there might be no risk of the bowels moving during the period under which they were under examination he advised that they be thoroughly emptied the day before the first examination was made, and in order to interfere as little as possible with the patient's routine the patient was first examined at 9 A.M. without having had breakfast. The second examination was made at 1 P.M., the patient having received strict injunctions to take no food in the interval. After the second examination the patient was allowed to take lunch and tea and dinner as usual. No purgative was given during the time the examination was being undergone. Taking Hertz's time-tables as his guide, he found that making examination at intervals of 3½, 8, 12, and 24 hours after the first, gave all the information obtainable in most cases, though occasionally one had to go on for 36 and 48 hours or even longer. Very often the 12 hours' examination could be omitted; this depended on the rate of progress observed on the screen. The skiagrams showed that they could demonstrate the exact position of the various organs comprising the alimentary system in health and also their variation in disease. Further accurate information regarding their conformation under the two conditions could be revealed. They could also learn something about the rate of progress through the alimentary canal of its contents, and should delay be one of the conditions present attention would be directed to the affected area with unerring truth. Lastly, it could give invaluable information with regard to the condition of the walls of the various organs, whether they were healthy or in a state of degeneration and atony. In those cases in which an operation was called for, the surgeon had at his command a method of investigation which enabled him to decide before opening the abdomen the nature of the operation he would probably be called upon to undertake and the extent of diseased intestine he had to deal with. Radiograms were shown of a case which demonstrated clear evidence of degeneration in the cæcum, ascending colon, hepatic flexure, and right half of the transverse colon, and in which Mr. Stiles, instead of doing a complete Lane's operation, resected the portion of large intestine mentioned and planted the ileum into the healthy left half of the transverse colon with very happy results. Another radiogram showed an even more advanced stage of atony, involving as it did the whole of the colon. Prints of this case were shown to Sir Arbuthnot Lane, and on the strength of them and of other clinical evidence he advised that a colectomy should be performed. Another case was that of a woman, aged 41 years, with symptoms attributed to intestinal stasis, headache, malaise, constipation, and unfitness for work. The radiogram showed that she had a very low colon and there was marked delay in the cæcum and colon. Mr. Stiles performed an ileopelvicolostomy, and eight months afterwards she was perfectly well. A radiogram taken then after a bismuth meal showed that a great part of the food had regurgitated into the transverse colon. Yet all symptoms which were supposed to be due to absorption from the large intestine had disappeared. This case seemed to bear out Professor Adami's contention that absorption from the large intestine did not take place, at any rate to the extent it was supposed to by some physicians.—Dr. G. LOVELL GULLAND thought that there might be spasm of the bowel and that the appearance which this presented in the radiogram might occasionally mislead one.—Mr. HAROLD J. STILES said that the more he saw of radiography the more highly did he think about it. It was most useful in cases of disease of the large intestine, though one could make a very correct diagnosis without radiography. Mistakes in radiograms might be due to faulty interpretation. He referred to Jackson's veil and its effects.—Professor WILLIAM RUSSELL, Dr. T. M. BURN-MURDOCH, Mr. A. SCOTT SKIRVING, and the VICE-PRESIDENT also took part in the discussion.

Dr. BYROM BRAMWELL gave a communication on Diffuse Sclerodermia: its frequency, its occurrence in stonemasons, its treatment by fibrolysin, and elevations of temperature due to fibrolysin injections. He said that diffuse sclerodermia was a very rare condition. Dr. Phineas S. Abraham, the writer of the article on Sclerodermia in Allbutt and Rolleston's "System of Medicine," stated that McCall Anderson met with 2 cases in 11,000 diseases of the skin, and Crocker 2 in 10,000 cases. In 17,140 general medical cases seen in his (Dr. Bramwell's) hospital practice (3502 in-patients and 3638 out-patients) there were 7 cases of diffuse sclerodermia, and in 10,000 general medical cases seen in private practice of which he had kept notes there were 2 cases. Cases of diffuse sclerodermia came at least as frequently under the care of the general physician as under the care of the dermatologist. In 21,000 cases of diseases of the skin seen by McCall Anderson and Crocker, there were 4 cases of diffuse sclerodermia, while in his 27,000 cases of general medical disease there were 9 cases of this disease. His next point was the relatively frequent occurrence of diffuse sclerodermia in stonemasons. In his 9 cases 5 were stonemasons and one was a coppersmith, who also was accustomed to work with a cold chisel. The only apparent cause which he was able to suggest for the relatively frequent occurrence of diffuse sclerodermia in stonemasons was the holding of a chisel in the hand during cold weather. In all these 6 cases the disease commenced in the hands. In none of these was there any history of syphilis. Dr. Phineas Abraham made no mention of the occurrence of this disease in stonemasons and he informed him (Dr. Bramwell) that he knew of no writer who did so. He felt certain that his own experience on this point could not be peculiar. He had been so impressed with the occurrence of sclerodermia in stonemasons that in the last three cases which had come under his observation he had correctly suggested the occupation of the patient as soon as he had seen and felt the hands and before he had asked him a single question. The next point to which he referred was the marked improvement which resulted in some of his cases of diffuse sclerodermia from subcutaneous injections of fibrolysin. In two of his cases the injections, which at first produced no disturbance of temperature and pulse, later produced marked elevations of temperature. In both cases these temperature alterations were identical in character. In a case of disseminated sclerosis a very high temperature (105·8°F.) followed an injection of fibrolysin. Dr. Bramwell then drew attention to the close resemblance in some of its clinical features of diffuse sclerodermia to Raynaud's disease. In almost all of the cases exposure to cold produced the same cold, blue, dead condition of the hands which was such a striking feature of Raynaud's disease. In four of the cases painless sores, which were very slow to heal, developed on the knuckles or finger tips, apparently as the result of slight injuries; in one case the tip of one of the fingers became gangrenous. In one case shown to the society the condition when he first saw it 14½ years ago was typically that of sclerodermia—the hands, feet, face, and thorax were affected. The hard, brawny, swollen condition of the hands and the hide-bound condition of the face and front of the chest had now in great part disappeared. The fingers had become bent in towards the palm and the tips of several of them were destroyed or distorted as the result of trophic lesions, highly suggestive of Raynaud's disease. Further, nævi and pigmented patches characteristic of xerodermia pigmentosum had developed on the face, chest, and back. Hæmatinuria was carefully inquired for, but was not observed in any of the cases, though in several, pains, apparently rheumatic, and stiffness of the joints were complained of. The clinical features of diffuse sclerodermia were, to his mind, very suggestive of a trophic or vaso-motor neurosis, but in none of the cases were any definite objective symptoms suggestive of syringomyelia or other definite nervous lesion detected.—Dr. R. CRANSTON LOW thought that Dr. Bramwell's experience was unusual, as most of the cases occurred in females. He thought that the rise of temperature seen after the first few injections had been given were due to sensitisation or anaphylaxis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

President's Address.—Admissions to Westmorland Lock Hospital, Dublin, since 1860.

A MEETING of this section was held on Jan. 16th, Dr. T. PERCY C. KIRKPATRICK, the President, being in the chair.

The PRESIDENT delivered an address dealing with the

origin of some of the existing Dublin hospitals, which was illustrated by lantern slides.

Dr. G. E. PUGIN MELDON read a paper on Admissions to the Westmorland Lock Hospital, Dublin, since the year 1860. He illustrated his remarks by charts, showing the yearly admissions and also the diseases. The decline in the number of admissions he attributed chiefly to three causes—namely, less acute symptoms, closing of irregular houses in the city, and change in the type of prostitute. He also showed tables of the birthplaces of the patients.

Mr. H. MOORE urged the necessity for this section of the Academy laying its views before the Royal Commission at present sitting to inquire into the subject of venereal disease. He referred to the fact that the terms of reference excluded the consideration of the conditions under the Contagious Diseases Act. He maintained that the principal source of venereal disease was the prostitutes, and that unless something was done to stop the disease amongst them and make them come up for treatment energy would only be wasted. In his opinion every medical body ought to express their opinion very definitely on the subject—i.e., unless the source of the disease is tackled it cannot be stopped. General hospitals should be called upon to undertake the treatment of syphilis and gonorrhœa, as otherwise students could not be expected to be acquainted with the diagnosis and treatment of such affections.

Dr. J. A. MATSON said he thought that the incidence of the disease was decreasing. He was struck by the objections which some respectable women who had contracted the disease had to go for treatment to the Lock Hospital. His view was that this hospital should be looked upon as the proper place for treatment of every woman so suffering. His experience was that those patients who had been treated at the Lock Hospital always sought treatment afterwards when there were manifest ations of a recurrence of symptoms, but that they went to other hospital dispensaries rather than to the Lock Hospital, knowing that they would receive treatment as out-patients. He pointed out that in Dublin there was a large number of women known as "privateers" who spread infection much more than the regular prostitute. He mentioned that the increase of venereal disease in Liverpool was found to be enormous after the repeal of the Contagious Diseases Act.

Dr. R. J. ROWLETTE said that accurate statistics on the subject were most necessary, and if notification could give accurate statistics he thought the profession should declare in favour of notification, but it seemed to him that as a preventive of the disease notification would be the worst step that could be taken, as it would, he considered, put a barrier in the way of early treatment. If a patient suffering from venereal disease had to be notified, he thought the result would be that he would not seek treatment until forced to do so. He considered notification a most dangerous step, and expressed the hope that the profession would be opposed to it. He suggested that if each medical man was asked to make a return of cases treated by him without giving any names some help might be given, although he was alive to the fact that in this way there might be overlapping by the same patient consulting different doctors.

The PRESIDENT said that any return to the Contagious Diseases Act was not only unlikely and would be unsatisfactory, but was absolutely impossible and outside practical politics at present. He did not think that the notification of infectious diseases had proved the great panacea which the public health authorities would have us believe. He agreed with Dr. Rowlette that any form of notification of venereal disease would tend rather to increase the disease than diminish it. He looked forward to early and accurate diagnosis to diminish the disease. He considered that every medical man should have at his disposal the latest scientific methods for making accurate diagnosis, and this he believed would do more to stamp out the disease than anything else. His experience was that men were not adverse to treatment, but that there was some difficulty in getting them to continue it sufficiently long, but provided an early and accurate diagnosis could be made he thought that much could be done to stamp it out at all events in men. He did not consider there was any great change in the severity of the disease.

Dr. J. M. DAY, Dr. G. E. NESBITT, Dr. W. M. CROFTON, and Dr. W. A. WINTER also spoke, and Dr. MELDON replied.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Feb. 6th, Dr. David Ross, the President, being in the chair.—Dr. T. B. Hyslop read a paper to open a discussion on Neurasthenia. After discussing the question as to the prevailing confusion with regard to the term neurasthenia and to its unwarrantable extension so as to include widely different conditions which in reality pertained to other affections Dr. Hyslop discussed the mechanism of the nerve unit, the intracranial circulation, and the various processes of waste and repair, both in the normal and in the morbid. From the clinical standpoint he considered that there was no affection, or group of symptoms, or syndrome more prevalent, or more likely to become more increasingly prevalent, than that of neurasthenia. It is a disease of civilisation and also, in his opinion, a warning that over-pressure, when combined with defective bodily health, could have but one result—viz., degeneration. The nervous system in itself is capable of vast and continued exertion so long as it is adequately and efficiently maintained by the body mechanism of waste and repair, and the finer and the more sensitive the nerve mechanism the greater the need for the careful regulation of its nutritive and excretory processes. This is exemplified in connexion with some forms of nervous and mental disorder which, although frequently regarded as hereditary and therefore incurable, are in reality mainly hereditary defects of the bodily mechanism by means of which the waste and repair of the nervous system are duly effected. The truth of this statement, he thought, was exemplified in families which were prone to suffer from glandular anomalies with imperfect balance of the nutritional and metabolic processes. The part played by the internal secretions was next discussed, and examples of the results of defects in the functions of the thyroid, parathyroid, pituitary, adrenal, and testicular organs were discussed. Although we were as yet unable to form clear conceptions as to the relative rôles of the internal secretions, their importance in maintaining health was clearly evident. Undoubtedly many of the psychoses, both alternating, progressive, and permanent, might be traced to defects in these or other glands—the nervous system itself being merely a participant in the general metabolic defect. He was inclined to believe that all the rhythmical, alternating, or intermittent psychoses were due to faults in the mechanism of waste and repair as determined by the various organs of excretion and secretion. He regarded therefore every form of psychosis which is rhythmical or alternating in its occurrence as being somatic and extracranial in origin. The various effects of variations in intracranial arterial and venous blood pressure were next discussed and clinical examples given.

BRITISH OTO-LARYNGOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 29th, Mr. Chichele Nourse being in the chair.—Dr. Percy Jakins showed (1) a case of Cancer of the Larynx in a man aged 43, with ulceration of both vocal cords; and (2) a case of Tertiary Syphilis of the Larynx, with paralysis of the right vocal cord, œdema of the arytenoids, and a positive Wassermann reaction.—The cases were discussed by Mr. Nourse, Mr. C. J. Heath, Mr. G. Jackson (Plymouth), and Dr. J. Coubro Potter.—Dr. Byrne replied to the discussion in the absence of Dr. Jakins.—Mr. Heath read notes of three interesting and instructive cases of Aural Suppuration.—In the discussion on the first case Dr. Potter expressed the opinion that it was not always advisable in cases of chronic aural suppuration to conserve the drum and ossicles owing to the liability of fibrous tissue to form in the tympanum after operation and thus impair the hearing. In regard to closing the Eustachian tube, this, he thought, was not always a good practice, as after operation hearing was sometimes much improved upon inflation with the Eustachian catheter.—Mr. Cyril Horsford also discussed the question of the correct treatment of the Eustachian tube. He could not agree with the view that it was a *sine quâ non* that the Eustachian tube should be closed. Was it not better to have an ear moist but hearing rather than dry but deaf? Moisture after operation might be looked on as a sign of success and not failure.—Mr. Nourse raised the question of the best treatment of the tympanic orifice of the Eustachian tube. It seemed to be an accepted fundamental principle in all cases to curette this orifice. He doubted very much if it was always correct. It would certainly have the effect of drying the tympanic cavity and

might seriously impair the hearing.—In reply, Mr. Heath said that in radical operations he retained the mucosa of the inner tympanic wall and left the Eustachian tube open, because the mucous membrane required a drain, and none was so effective as the tube. To the assertion so often made that with a patent Eustachian tube the tympanic mucosa was liable to infection through it, he would reply that this mucous surface was far more freely exposed to bacterial infection through the large meatus than through the small Eustachian tube, yet it was the latter only which attracted attention. When possible he preserved the drum-head in order to prevent evaporation from the middle ear.—After Mr. Heath's other two cases had been described and discussed, Mr. Nourse exhibited a case of Double Abductor Paralysis of very short duration, and in which the clinical signs and symptoms pointed to the presence of a mediastinal growth.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A pathological meeting of this society was held on Feb. 6th at the West London Hospital, Dr. F. S. Palmer, the President, being in the chair.—The following specimens were shown. Mr. W. McAdam Eccles: (1) Diverticulitis of Colon (iliac); (2) Empyema of Gall-bladder; (3) Two-inch French Nail swallowed by infant and passed naturally; (4) Myxofibroma of Ileum causing intussusception.—Mr. Aslett Baldwin: (1) Hydro-nephrosis; (2) Carcinoma of Rectum; (3) Uterus with Sloughing Fibroid; (4) Microscopic section of Carcinoma of Breast; (5) Microscopic Section of Sarcoma of Rib.—Mr. Donald Armour: (1) Two Spinal Cord Tumours; (2) two Brain Tumours; (3) Gall-bladder and part of Liver removed for Carcinoma; (4) Carcinoma of Cæcum.—Dr. Arthur Saunders: Microscope slides from case of Lymphatic Leukæmia.—Mr. H. S. Souttar: (1) Diverticulitis of Ascending Colon with Large Stercolith: (2) Calcified Fibroma of Ovary, 4½ lb. (obstructed labour); (3) Strangulated Appendix from Femoral Hernia; (4) Gastric Ulcer perforating Abdominal Wall; (5) Carcinoma of Rectum; (6) Fibroids.—Dr. E. F. Travers: Carcinoma of Body of Uterus and Microscopic Section of Endometrium.—Dr. J. M. Bernstein: (1) Typhoid Ulceration of Cæcum, Colon, and Appendix; (2) Acute Osteomyelitis of Humerus; (3) Nasal Septum of Horse showing Glanders.—Mr. N. Bishop Harman: (1) Glioma of Eye; (2) Sarcoma of Choroid.—Dr. H. J. F. Simson (1) Carcinoma of Body of Uterus; (2) Fibroids; (3) Fibrosis of Uterus; (4) Sloughing Fibroid; (5) Extra-uterine Gestation.—Dr. R. R. Elworthy showed an extremely fine collection of interesting specimens recently added to the museum; also a large number of microscopic sections of specimens and films of organisms, &c.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 14th, Dr. P. Watson-Williams being in the chair.—Dr. Carey F. Coombs read a paper on Conditions Simulating Thoracic Aneurysm, in which he stated that three groups of cases may be recognised—namely, (1) diffuse aortic dilatation; (2) aortitis, syphilitic and otherwise; and (3) mitral stenosis producing enlargement of the left auricle with pressure signs, or hypertrophy of the conus arteriosus dexter with abnormal pulsation.—Dr. Watson-Williams showed two patients on whom an intranasal frontal sinus operation had been performed by opening up the fronto-ethmoidal cells from a point corresponding to the anterior attachment of the middle turbinal.—Dr. G. Munro Smith read notes on two cases, females aged 61 and 76 years respectively, both of whom presented during life signs simulating Malignant Disease of the Liver—namely, jaundice with enlargement of the liver and a visible and palpable tumour apparently in the liver. The diagnosis was confirmed in each case by several medical men, but after death the tumours had disappeared, and in the first case a post-mortem examination showed the liver to be normal in size and no tumour to be present. No post-mortem examination was performed in the second case.—Professor James Swain suggested that the condition was one of phantom tumour of the rectus abdominis.—Dr. J. Michell Clarke thought that the hepatic enlargement was due to engorgement secondary to cardiac failure.—Mr. J. P. I. Harty showed a case of Acute Mastoiditis involving the outlying cells alone, a subperiosteal abscess forming over the mastoid without involvement of the middle ear or mastoid antrum.

Reviews and Notices of Books.

A Manual of Venereal Diseases.

Introduction by Sir ALFRED KEOGH, K.C.B., late Director-General of the Army Medical Service; History, Statistics, and Invaliding, by Brevet Colonel C. H. MELVILLE, R.A.M.C., late Professor of Hygiene, Royal Army Medical College; Clinical Pathology and Bacteriology, by Brevet Colonel Sir WILLIAM LEISHMAN, K.H.P., F.R.S., R.A.M.C., Professor of Pathology, Royal Army Medical College; Clinical Course and Treatment, by Major C. E. POLLOCK, R.A.M.C. Second edition, revised and largely re-written, with new matter by Major L. W. HARRISON, R.A.M.C., Clinical Pathologist, Military Hospital, Rochester-row. London: Henry Frowde and Hodder and Stoughton. 1913. Pp. 318. Price 10*s.* 6*d.* net.

THE opportunity afforded by the demand for a second edition of this book has been taken thoroughly to revise and in fact to re-write it, for it was essential to incorporate the great and rapid advances of our knowledge of syphilis. The work has been well done and reflects great credit on its authors. The importance of a good knowledge of venereal disease cannot be overrated, and the writers of this book are well qualified for their task by the positions which they occupy.

Unfortunately the British Army suffers greatly from all forms of venereal disease, but there is good evidence of much improvement in this respect. The numbers of those sick in the army both for syphilis and for gonorrhœa tended steadily to increase until about the year 1886, when syphilis accounted for a daily inefficiency of 13 per 1000 and gonorrhœa of 7 per 1000. From this time the figures have fallen, and in 1910 each was responsible for less than 4 per 1000. While many causes have coöperated, Sir Alfred Keogh expresses the opinion that the chief cause of this diminution has been an increase in temperance. The chapter on the methods of prevention is one of the most interesting in the book, and it is probably the most important. The value of inculcating continence is also insisted on, and it is mainly to these two factors—temperance and continence—that we must look for an improvement in the extent of these diseases, not only in the army, but also in the general population.

A very good account is given of the spirochæta pallida and the various methods of demonstrating its presence, and a most valuable chapter is that devoted to the Wassermann reaction, which is of such great importance both in diagnosis and in treatment. We are glad to see it pointed out that there is no stage of syphilis in which the percentage of positive reactions to the test is 100, so that a negative reaction can never certainly exclude the disease, though it is too often accepted that a negative test is certain. The luetin reaction is spoken of with much favour, and we think it is a pity that this test is not employed more widely in this country. The clinical course of the disease is well described, and some good coloured illustrations of skin manifestations are given.

Perhaps the most important chapter is that dealing with treatment. The mixed treatment of salvarsan and mercury is recommended, and this agrees with the opinions of most of those who have had much experience in this matter. On the whole, preference seems to be given to salvarsan as compared with neosalvarsan, mainly on account of the instability of the latter drug; and it is stated

that it would be inadvisable to employ neosalvarsan in tropical climates.

Altogether, we have been very pleased with this work. Practitioners may safely trust to its teaching and will find adequate accounts in it of all venereal conditions.

A Dictionary of Applied Chemistry.

By Sir EDWARD THORPE, C.B., LL.D., F.R.S., assisted by Eminent Contributors. Revised and enlarged edition. In five volumes. Vol. V. With illustrations. London: Longmans, Green, and Co. 1913. Pp. 830. Price 45*s.* net.

THE final volume of this great dictionary contains several articles of interest to medical readers. Prominent amongst these may be mentioned "Synthetic Drugs, or Medicinal Products," by Dr. Virgil Coblenz, of New York; "Vegeto-alkaloids," by Professor Wyndham R. Dunstan and Dr. T. A. Henry; "Urine," by Dr. W. D. Halliburton; and "Toxins and Antitoxins," by Professor R. T. Hewlett. Opinions will differ as to whether the subjects of the last two articles mentioned properly fall into the category of "applied chemistry," but the difficulty of deciding what subjects to include and what to exclude will be understood. The ever-increasing applications of chemistry which lead every year to the creation of fresh industries makes the inclusion of physiological processes very generous. But it is obvious also that there are many substances which, though not of direct industrial importance, call for a reference in a dictionary that, according to the preface to the first volume, claims to give "a presentation of contemporary knowledge, both as regards the science and its applications"—and lives up to its claim. The article on urine is a purely chemico-physiological monograph, and does not refer to the use of that excretion in certain, though it may be classic, technical processes.

The list of contributors again shows the selection of admitted authorities upon the individual subjects treated. Professor Percy Frankland, for example, has written an admirable article upon water, in which he deals not only with general questions of natural supply but also with specific considerations relating to purity, action on metals, and methods of chemical and bacteriological analysis. This monograph occupies over 50 pages of the dictionary, and the importance of the subject demands adequate treatment. It is here approached from many points of view and always in the light of modern knowledge, and it has been a real pleasure to read it. The section on vegeto-alkaloids shows also exhaustive treatment, something like 53 pages being devoted to these bodies, interesting alike from a chemical and a pharmacological point of view.

In the contribution on synthetic drugs or medicinal products a useful classification is adopted into: (1) antipyretics, antirheumatics, and antineuralgics; (2) antiseptics and disinfectants, nonphenolic and phenolic; (3) diathetics; (4) anæsthetics; (5) organic arsenicals and chemo-therapeutics; (6) synthetic cathartics; and (7) organotherapeutic agents. Altogether, and considering the space at the writer's disposal, this is a very able collation of facts. The longest article of all is that on sodium by Dr. Arthur Carey, of the United Alkali Company. Chemists will appreciate the completeness with which all the processes that appertain to the great soda industry and soda products generally have been described. Mr. James Connah, of the Government Laboratory, has contributed three excellent and up-to-date articles upon tea, whisky, and wine respectively. Another Government chemist, Mr. D. A. Gracey, has written an illuminating monograph on tobacco, although we should like to have had some further particulars on the addition of sweetening agents, oils, and flavouring materials to tobacco, for this is now a common practice in spite of the Pure Tobacco Act of 1842. There is very little pipe tobacco sold now which is free from foreign flavourings that bear no sort of likeness to the flavour of the real pure leaf itself.

Another exhaustive article is that on sugar, contributed by a well-known authority, Mr. B. E. R. Newlands, who unfortunately died recently. The distinguished expert, Dr. Julius Lewkowitsch, who contributed the articles on tallow and certain oils, also died a short while ago; while Mr. John Heron, a classic authority on the starches, and the writer of the articles in the dictionary on this subject, is now unfortunately amongst the contributors described in parentheses as "the late."

At the outset we congratulated Sir Edward Thorpe on his choice of contributors. We beg to congratulate him again, now that we have completed our review of the series, on having received the coöperation of men obviously eminent in the subjects allotted to them to write upon. The five volumes present a remarkable wealth of material in regard to applied chemical science, and no scientific reference library will be without them. Now that this dictionary of applied chemistry is completed it is to be hoped that its companion on pure chemistry—viz., "Watts' Dictionary of Chemistry"—will similarly be brought up to date. The last edition of this work was issued in 1890, and the justification for the new edition of "Applied Chemistry," that chemistry has advanced by leaps and bounds since that date, applies equally to the work on pure chemistry.

The Practice of Obstetrics.

By J. CLIFTON EDGAR, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, &c. Fourth edition, revised. Twenty-second thousand. Illustrated. London: Henry Frowde and Hodder and Stoughton. 1913. Pp. 1062. Price 30*s.* net.

Professor Edgar's excellent work has now reached its fourth edition and its twenty-second thousand. It contains the results of a large clinical experience and is a mine of information. The fourth edition has been thoroughly revised and much new material has been added.

A series of observations on the blood pressure carried out on 145 women in the last months of pregnancy show that the blood pressure in pregnancy is apt to be low, rarely exceeding 120 mm. of mercury. In the latter months the average is 115–120 mm., until the beginning of labour, when there is a rise of 15–20 mm. The author accepts Gerhardt's view that the displacement of the heart's apex by the growth of the fœtus has been misinterpreted as a sign of hypertrophy. In the treatment of cases of sepsis, Professor Edgar has had good results from the employment of a polyvalent serum used locally and subcutaneously in 50–60 c.c. doses every 48 hours for three doses if necessary. He has tried vaccines persistently and without success. The author's conclusions as to extraperitoneal Cæsarean section are as follows: in uninfected cases the operation does not give such good results for mother and child as ordinary Cæsarean section. Even in

infected cases it has yet to be shown that the extraperitoneal operation is superior to the classical operation combined with eventration of the uterus and its subsequent removal. It must be remembered, however, that in the extraperitoneal Cæsarean section the uterus is saved for future child-bearing. Unlike most obstetricians at the present time, the author does not recognise that pubiotomy has any advantages over the older operation of symphysiotomy, and regards the danger of injuries to the maternal soft parts as about equal in the two operations.

A new section is added on Momburg's method of constriction of the abdomen for the control of uterine hæmorrhage; stress is laid upon the several dangers which may attend this procedure. They are necrosis of the intestine from the pressure, embolus from thrombus formation in the constricted aorta, failure of the heart and circulation both during the application and after the removal of the rubber band, and miscellaneous injuries from pressure. The method is undoubtedly a valuable one, but must be used only in desperate cases, and then with discretion and care. Additional space also is devoted to a consideration of cases of funnel pelvis, a contracted outlet being regarded as one in which the transverse diameter between the tuberosities of the ischium measures 3¼ inches or under. In measuring the posterior sagittal diameter Professor Edgar employs what he terms the direct manual method. In this the ulnar border of the right fist is adjusted to the sacrococcygeal joint and the upper surface of the flexed index finger or of the thumb is made to correspond to the interischial diameter. The diameter of the fist between these two points is then measured with a pelvimeter.

The book is very profusely illustrated; six of the old illustrations have been re-drawn and 51 new ones added to the text. The index is good and full, and this edition certainly should have as favourable a reception from the profession as the preceding ones.

Arterio-sclerosis: Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, and Treatment, with a Special Chapter on Blood Pressure.

By LOUIS M. WARFIELD, A.B., M.D., Assistant Superintendent and Resident Physician to Milwaukee County Hospital, &c. With an Introduction by W. S. THAYER, M.D. Illustrated. London: Henry Kimpton. Pp. 220. Price 10*s.* 6*d.* net.

THIS useful monograph upon the important subject of arterio-sclerosis has reached the second edition and been brought thoroughly up to date. Arterial disease and degeneration are so common that they have recently received careful study from the various standpoints of the clinician, the histologist, and the experimental pathologist. The results obtained are admirably summarised and critically discussed in the book before us. Professor Thayer, in a brief introduction, strongly condemns the widespread and indiscriminate popular use of the term arterio-sclerosis as a complete and satisfactory clinical diagnosis, where tortuous temporal vessels or palpable radials co-exist with obscure symptoms.

In the first two chapters Dr. Warfield deals with the anatomy and pathology of arterio-sclerosis and gives a clear account of its histology. He also discusses the experimental work carried out with a view of inducing like changes in the vessels of animals. He deals with the physiology of the circulation and gives a full account of the various forms of sphygmomanometer and of the methods of using them, together with a careful consideration of the information obtainable by their use. The etiology of arterio-sclerosis and the clinical features presented by patients with arterio-sclerotic changes in their vessels are considered at length.

Diagnosis and prognosis are dealt with fully in separate chapters. Dr. Warfield lays special stress upon prophylaxis, and counsels "moderation in all things as the keynote to health." He suggests that men and women past the age of 40 years should be urged to submit to a routine physical examination by their medical attendant twice a year. The treatment of arterio-sclerosis and of its consequences is dealt with fully, and some useful general directions are given as regards both the ordering of the life and habits of the patient and the medicinal treatment. A short chapter is devoted to arterio-sclerosis in its relation to life insurance.

We can commend this book as a readable and instructive presentation of a difficult and debatable subject.

Elements of Water Bacteriology, with Special Reference to Sanitary Water Analysis.

By SAMUEL CATE PRESCOTT, Associate Professor of Industrial Microbiology in the Massachusetts Institute of Technology; and CHARLES EDWARD AMORY WINSLOW, Associate Professor of Biology, College of the City of New York, and Curator of Public Health American Museum of Natural History, New York. Third edition, rewritten. First Thousand. London: Chapman and Hall. 1913. Pp. 318. Price 7*s.* 6*d.* net.

DURING the ten years that have elapsed since the appearance of the first edition of this work water bacteriology, so far at least as it relates to examination for sanitary purposes, has undoubtedly advanced, and is on a much sounder, because broader, basis. Lapse of time, which has permitted the accumulation and comparison of large numbers of analyses, is chiefly responsible for this advance. The basis of sanitary water analysis is the correlation of analytical results with the known conditions affecting a water connected with its source, the geological formation from which it is derived, the chances of contamination, or the disasters produced by its use. That this correlation should be of value it is necessary that the analyses should be made by standard methods, and it was the lack of uniformity in this respect that proved the great stumbling block in the early days of bacteriological water examination. The standardisation of methods by the American Public Health Association and the subsequent adoption of a similar standard by English workers constituted a great advance; the standard methods advised form an appendix to this book. Unfortunately this uniformity has been disturbed by the recommendation of the American committee to replace the count of colonies at 20° C. by that at 37° C., a recommendation with which the authors do not agree. They express themselves strongly in favour of the current English practice of making determinations at both temperatures, and give data showing the valuable information which may be gained by contrasting the results so obtained.

Much new information has been incorporated in this edition on the natural history of bacteria in waters of varying purity and under various conditions of temperature and storage. Numerous methods also for the isolation and identification of various pathogenic germs have been elaborated and

introduced with more or less successful results; but the essential methods employed in the routine analyses for sanitary purposes have remained very constant, and the changes have been chiefly in the deductions from the results necessitated by fuller knowledge rather than in alterations in the methods employed. The pivot of all sanitary water examination turns on the discovery and identification of B. coli, and a considerable portion of the book is occupied with the methods employed in its isolation and the interpretation to be placed on the number and variety to be found. These questions, especially as to the universality and variety of strains of B. coli, are considered in some detail, but not to the point of obscuring the practical conclusions which may be drawn as to the evidence of fæcal contamination from the presence of bacilli which can produce fermentation with gas production when growing in lactose bile broth at 37°C. The authors do not show that tendency "to set B. coli on a high throne and dance before it" which Professor Gärtner deplores. In the United States it appears probable that all the members of the lactose-fermenting group of bacilli are evidence of human or animal pollution. The significance of sewage streptococci and of B. enteritidis sporogenes is dealt with and the value and applicability of bacteriological examinations are discussed. Chapters on the bacteriology of sewage and on the examination of shell-fish conclude the book. There is a very full bibliography.

This book, which is well printed on good paper, furnishes a very complete and well-balanced account of bacteriological water analysis—a subject which has been not a little advanced by the original researches of the authors. To what beneficent results the right application of bacteriology to water-analysis may lead we have a remarkable testimony in the condition of the water-supply of London to-day, a subject dealt with in a leading article in our issue of Feb. 7th.

Text-book of Paleontology.

Edited by CHARLES R. EASTMAN, A.M., Ph.D., Professor of Paleontology in the University of Pittsburgh and Curator at the Carnegie Museum, Pittsburgh. Adapted from the German of KARL A. VON ZITTEL, late Professor of Geology and Paleontology in the University of Munich. Second edition, revised and enlarged by the editor in collaboration with a large number of specialists. Vol. I. With about 1600 illustrations. London: Macmillan and Co., Limited. 1913. Pp. 839. Price 25*s.* net.

THE "Grundzüge der Palæontologie," which forms the basis of the present work, was published in 1895. The American translator, Professor Eastman, instead of publishing a strictly literal translation, has modified it in important respects with the author's consent. When a second edition was called for, and in order that an adequate account might be incorporated of the new knowledge that has been gained in recent years, Professor Eastman invited a number of specialists, whose names are given, to collaborate with him in preparing a fresh treatment of the leading groups of invertebrates. The new work, therefore, is a composite production, yet it is in scope and style modelled after the well-known German original.

After defining the subject and its scope the author explains the relations of the subject to geology, physical geography, embryology, and phylogeny; he deals with "life period" and the extinction of species.

The several phyla are treated in the following order: Protozoa, cœlenterata vermes, echinodermata, molluscoidea, mollusca, and arthropoda. Naturally the sections on protozoa are short, and the longest chapter is devoted to the foraminifera and a shorter one to the radiolarians. From their constitution the cœlenterata necessarily bulk largely in palæontology, and to them nearly 100 pages are given. Beginning with the porifera, the intensely picturesque and interesting class of sponges is first considered, then the anthozoa and the great group of the corals, the alcyonarians and the graptolites. From their soft texture none are so poorly adapted for preservation in the fossil state as the worms, and therefore a few pages suffice for them. On the other hand, to the echinodermata, with their calcareous plates or calcareous bodies embedded in the integument and sometimes also in the walls of the internal organs—i.e., of the blastoidea, cystoidea, crinoidea, asteroidea, holothuridæ, and echinoidea—the four collaborators on this phylum devote over 170 pages. The phylum of the molluscoidea, including the bryozoa and the brachiopoda, requires over 100 pages for its elucidation, and of these pages to the brachiopoda alone—a very ancient group well represented in the Lower Cambrian and attaining their maximum development in the Silurian and Devonian rocks—nearly 70 pages are devoted, none too much, seeing that upwards of 7000 fossil and recent species have been described. The mollusca—which have existed since the earliest recognised advent of life upon the globe—and their progressive modifications afford a most important guide to the successive stages of the evolution of organic life as preserved in the various geological horizons. Their treatment occupies more than a quarter of the whole text. To the arthropoda, including the crustacea, the marine and very ancient trilobites, the ostracoda, cirripedia and their allies, the spiders, and the extinct representatives of limulus, myriapods, and insects, about 130 pages are given.

This work is an admirable epitome of the palæontology of the invertebrates, excellently printed, and illustrated most lavishly. It should prove invaluable to students of extinct fossil forms and their relations to existing forms of invertebrate life.

LIBRARY TABLE.

Carbon Dioxide Snow. By J. HALL-EDWARDS, L.R.C.P. Edin., F.R.S. Edin., Senior Officer in Charge of the X Ray Department, General Hospital, Birmingham. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1913. Pp. 78. Price 3*s.* 6*d.*—This is a very handy little volume, well written and well illustrated, and considering the popularity of carbon dioxide snow as a local application, one which will be appreciated by members of the profession. A good part of the work is taken up with describing various methods of preparing the snow for use, special attention being given to the one devised and used by the author, which appears to have many advantages. Methods of application and after-treatment are fully described, and in a special section the microscopic changes produced in the tissues are dealt with and illustrated by a series of microphotographs. The list of diseases in which this method of treatment has been found useful is a long one, and full details are given as to the proper method of application in each of them. The book can be cordially recommended.

The Pocket Anatomy. Seventh edition, revised and edited by C. H. FAGGE, M.B., M.S. Lond., F.R.C.S. Eng. London: Baillière, Tindall, and Cox. 1914. Pp. 307. Price 3*s.* 6*d.* net.—This useful review manual, the successor of the one-time "Pocket Gray," has been brought up into line with the fourth edition of Cunningham's Text-book of Anatomy, revised by Professor Arthur Robinson. As we said in reviewing the previous edition it is, if properly used, an extremely useful little book. It is pointed out in the preface that the chief innovation in the present edition is the inclusion of those terms from the Basle nomenclature which either have come, or appear to the editor likely to come, into general use.

Genera of British Plants Arranged According to Engler's Syllabus der Pflanzenfamilien (seventh edition, 1912). With the Addition of the Characters of the Genera. By HUMPHREY G. CARTER, M.B., Ch.B. Edin. Cambridge: University Press. 1913. Pp. 121. Price 4*s.* net.—The author, considering that there can be little if any doubt that no other published system of classification of plants rivals Professor Engler's in broad grasp of principle and thorough treatment of complicated detail, notwithstanding that it may be criticised in different points by different specialists, and that the existing lacunæ in our knowledge of different groups leave us far from finality, has compiled this little book to familiarise students of British plants with Engler's system. He has, however, exercised some eclecticism, modifying nomenclature here with a view to secure uniformity of terminations, and adopting other groupings there, as being more rational. The book will prove interesting and useful to students of systematic botany.

MISCELLANEOUS VOLUMES.

IN this section History and Ethics claim our attention with books by Dr. T. J. Walker, August Strindberg, Ethel Snowden, and Sir William Osler.

"That it may please Thee to shew Thy pity upon all prisoners and captives" are words which even now have lost none of their pathos and appeal. The lot of the prisoner is always hard, although it is now in most cases luxury compared to that which prisoners endured when the above-quoted words were written and for some 300 years later. In the year 1814, after the abdication of Napoleon, there were in Britain 67,000 French prisoners, distributed mainly at Dartmoor, Perth, Portsmouth, and Norman Cross, and it is the last-named "depôt" and the life therein which Dr. THOMAS JAMES WALKER describes in his interesting work, *The Depôt for Prisoners of War at Norman Cross, Huntingdonshire, 1796 to 1816.* (London: Constable and Co., Limited. 1913. Pp. 351. Price 10*s.* 6*d.* net.) Both British and French charged each other with ill-treating their respective prisoners, but, as Dr. Walker points out, the practice of the two Governments as regards their own prisoners differed. The British supplied British prisoners in France with clothing, while the French Government absolutely refused to do the same for their countrymen in British prisons. The charges of ill-treatment were certainly exaggerated. O'Brien, in Marryat's "Peter Simple," expressed the opinion that "when a man has been cramped up on board a man-of-war, where midshipmen are stowed away like pilchards in a cask, he finds himself quite at liberty in a prison." At Verdun, according to Dr. Walker, the officers seem to have enjoyed a certain liberty, but the common sailors and soldiers were by no means well treated. They were allowed by the French Government only 1*d.* a day for food, though this pittance was apparently in addition to "a small square piece of bullock's liver, a slice of black bread, and a glass of new brandy." Marryat implies that at Givet the conditions were much more severe than at Verdun, but even so his characters do not complain of real hardships. At Norman Cross the diet seems to have been good if monotonous. With slight variations it consisted of 1 quart of beer, ¾ lb. of beef, 1½ lb. of bread, together with peas or greens on alternate days, and on Saturdays cheese and butter. On Wednesdays and Fridays fish might be substituted for meat. The miseries which certain prisoners undoubtedly endured were due to their gambling away their rations, clothing, and bedding. The most depraved among the prisoners formed a class by themselves, known as Les Misérables. A similar class, known as the Romans, was later evolved at Dartmoor, of whom Dr. Walker quotes the terrible account given by Mr. Basil Thompson in his "Story of Dartmoor Prison." Many of the prisoners occupied themselves in work of a really artistic kind, and Dr. Walker describes and illustrates beautiful articles, such as work-boxes decorated with straw marqueterie or strips of paper, and carvings in bone. The model of the theatre, an illustration of which appears at p. 130, is very elaborate. Many of these works are now in the Peterborough Museum. In addition to the interesting account of the prison life, the book contains valuable appendices dealing with the prison at Verdun, parliamentary papers relating to French prisoners in Britain, and a correspondence concerning the Bishop, or Bishop-designate, of Moulins, who, having been expelled from France, ministered to the prisoners and was allowed by the British Government £240 per annum.—The title *Historical Miniatures* well expresses the scope of AUGUST STRINDBERG's book (London: George Allen and Co. 1913. Pp. 362. Price 5*s.* net), which Mr. CLAUD FIELD has well translated. Strindberg takes a series of historical events, such as the finding of Moses, the deaths of Socrates and Virgil, the flight into Egypt of the Blessed Virgin with the child Christ and St. Joseph, the defeat and death of Roderick the last Gothic King of Spain, the deaths of Nero, Julian, and Attila, of Henry VIII. and Louis XI., to mention only a few, and an episode in the life of Peter the Great. They make interesting reading even if they are not historically accurate, as in one instance is certainly the case. That instance is where Strindberg makes Virgil have a conversation with Horace at the latter's Sabine farm a few days before his death, which Strindberg says occurred at Naples. Now Virgil died at Brundisium within a few days of his landing there on his return from Athens. The most vivid account in the book is the sketch of Peter the Great and the condemnation to death of his son Alexis.

In *The Feminist Movement* (London and Glasgow: Collins' Clear Type Press. Pp. 262. Price 1*s.*) Mrs. Philip Snowden has given us a clear statement of the position of women workers in the society of to-day. Her volume will serve as a simple introduction to a subject which is at the present time so constantly brought to the attention of all those interested in social matters, for it shows plainly the need that is felt by the large number of women engaged in all forms of professions and employment for equality with men "in all those matters of their common humanity where sex does not enter and impose an impassable barrier." She also gives a *résumé* of the methods that have been used by feminists for a century or more to try to bring the attention of the general public to bear on this need. Incidentally Mrs. Snowden points out that a feminist is not of necessity also a suffragist, and that there are many who, while devoting much thought and work to the cause of oppressed women, still do not consider that she will be materially benefited by the grant of a political vote. She insists upon the illogical nature of the methods which have been, and are still being, employed to frustrate the endeavours of women to enter certain professions, and in addition points out that in many instances the law gives an unfair advantage to men as against women, but she omits to mention that by law a man is responsible for the torts of his wife. On the whole, the book gives a fair presentment of the case from the point of view of the feminist.

In his address to Yale students, now published with the title of *A Way of Life* (London: Constable and Co., Limited. 1913. Pp. 62. Price 1*s.* net), Sir WILLIAM OSLER gives us another of those demonstrations in applied philosophy, which on previous occasions have marked him out as a skilled craftsman in moral mechanics. As the master word in medicine for him is work, so the way of life is for him equally simple. It consists in "the practice of living for the day only and for the day's work—life in day-tight compartments"; not, however, in the hedonistic spirit, but because the day of a man's salvation is *now*, and he

should live it earnestly, intently, neither dwelling on the pains or the joys of the past nor anticipating those of the future. Keep the body fit—thus helping to keep the mind pure—he says, and avoid slackness by "control of the two principal instincts—biologic habits—the one concerned with the preservation of the individual, the other with the continuance of the species." To this he adds Christ's advice to Nicodemus: "Ye must be born of the spirit," which he interprets as becoming initiated into the fraternity of the great souls that make up the moral radium of the world. *A Way of Life* is a good prescription from a wise physician for the health of man's body, spirit, and soul.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLVII., Nos. 4 and 5, December, 1913. Cambridge University Press. Price 8*s.*—Some Factors which Determine the Blood-flow through the Coronary Circulation, by Josef Markwalder and Ernest H. Starling. The authors, after considering the various methods hitherto used, adopted that of Morawitz, but they used the now well-known "heart lung preparation" obtained from the dog, and they found that Morawitz's method of catheterising the coronary sinus could be applied with ease to this preparation. They find that the blood which can be collected in this way amounts to about three-fifths of the total blood flowing through the heart wall. Moreover, the coronary circulation is intimately dependent on the arterial pressure. As to chemical factors, they find that adrenalin causes dilatation of the coronary vessels, a statement made also by previous investigators. The addition of CO_2 to the circulating blood so as to increase the CO_2 tension causes dilatation of the coronary vessels associated with dilatation of the heart. Still more marked than the influence of CO_2 is the effect produced by the total products—i.e., metabolites—which accumulate in the blood during asphyxia. The authors conclude that the most potent agents which cause dilatation of the coronary vessels are the non-volatile metabolites produced by the heart muscle. According to the authors, by this means a local mechanism is supplied by which the heart muscle will increase the circulation through itself whenever increased demands are made on its functional activity. In asphyxia the circulation through the heart is at its maximum just before the heart fails altogether.—Experiments on the Pulmonary Circulation, by H. Fühner and E. H. Starling. The heart lung preparation obtained from the dog was used, and the heart volume was recorded by a simple volume recorder already used by Starling and his pupils. We have not space in which to describe the technical details, but the results obtained show that with a pressure of 80–100 mm. Hg in the aorta the pressure in the pulmonary artery of the dog is 14 mm. Hg, while at the same time the pressure in the left auricle and in the vena cava inferior is about 7 cm. *water*. On an average the pulmonary arterial pressure stands to the systemic arterial pressure as 1 : 6. In asphyxia the failing heart dilates, and the output of the left ventricle gradually diminishes, with a consequent fall in the aortic pressure. At the same time the pressure in the pulmonary artery, vena cava, and left auricle rises. When the right heart also fails the pressure in the pulmonary artery falls to that in the pulmonary vein and vena cava. Adrenalin causes diminished volume of the heart and raises the pressure in the pulmonary artery with a simultaneous fall of pressure in the left auricle. These effects on the pulmonary circulation, the authors conclude, must be due to a contraction of the lung vessels, since even on the isolated lung perfused with an artificial circulation, adrenalin produces a rise of pressure in the pulmonary artery.—Heat Production in Prolonged Contraction of an Isolated Frog's Muscle, by A. V. Hill. This paper is divided into three parts, and is a continuation of the author's already well-known researches on muscular heat, if such a term is admissible. The well-known thermopile of Heidenhain is replaced by the author's conical thermophile, which eliminates very largely the errors due to slipping over the junctions. The heat production, it appears, is determined by, and is proportional to, the length of the fibres during activity. Those who are interested in this problem will see the bearing of this question in relation to isotonic and isometric contractions.—The Auto-Catalysis of Trypsinogen, by H. M. Vernon; and the Ferments of the Pancreas, Part III.: The Properties of Trypsin, Trypsinogen, and Enterokinase, by John Mellanby and V. J. Wooley. These two papers deal with very complex questions. Vernon maintains that recently activated juice may have considerably more activating power than enterokinase itself on the trypsinogen of inactive juice, and he finds that recently activated juice is exceedingly unstable. As the summary and conclusions of the second paper occupy nearly two pages, we must refer the reader to the original paper.—Lactic Acid Formation, Survival Respiration, and Rigor Mortis in Mammalian Muscle, by W. M. Fletcher. This is a communication of much interest to physiologists, because the author has taken care in estimating the lactic acid formation after excision to discriminate between the white (pale) and red muscles of a limb. A red muscle (soleus) shows a much slower rate of survival acid production than the white muscle.—The Sugar Consumption in the Surviving Normal and Diabetic Heart, by E. W. H. Cruickshank and S. W. Patterson. Cats were used. Depancreatised cats became completely diabetic, and they lived for not more than two or three days after complete extirpation of the pancreas. Amongst other statements we find "that there may be a diminution in the power of the diabetic heart to utilise sugar."—Studies on Pellagra: I., The Influence of the Milling of Maize on the Chemical Composition and Nutritive Value of Maize-meal, by Casimir Funk. The author concludes that in maize the localisation of vitamines is closely analogous to that of rice, and it would seem that the vitamines are distributed in the external layers of the grain. The influence of diet on growth, normal and malignant, in relation to vitamines formed the subject of a paper by the same author published in THE LANCET of Jan. 10th, p. 98.—The Influence of CO_2 on the Heart in Varying Degrees of Anæsthesia, by E. P. Cathcart and G. H. Clark. The authors are carrying on a further series of experiments, but as regards the practical aspects of their work they assert that it certainly gives support to the contention that if anæsthesia is to be carried out with any degree of safety it must be deep.

The Journal of the East Africa and Uganda Natural History Society (London: Longmans, Green, and Co. Price to non-members 5*s.* 4*d.*).—The December issue contains several articles of much interest, especially the one with which the journal opens. It is by Mr. R. B. Woosnam, F.Z.S., game warden for British East Africa, and discusses the question of the Relation of Game Animals to Disease in Africa. The writer's conclusion is that there is at present not sufficient scientific evidence to justify the extermination of game as a means of clearing a district of diseases transmitted by blood-sucking insects. He asks: "If wild animals can acquire an immunity in nature, and domestic cattle can also acquire immunity, is it not possible that the greatest success may eventually result from an artificially produced immunity?" The question has been recently debated in our columns by Professor J. L. Todd, who opened the discussion (THE LANCET, Nov. 22nd, 1913, p. 1504), Dr. Geoffrey D. H. Carpenter, Dr. Warrington Yorke, and others.—Mr. E. Wynstone-Waters, F.R.S. Edin., continues his description of the Organic Cell.—Other papers are: The Tribes of Tana Valley, by Miss A. Werner, and the Scientific Classification of Some of the Sea Fishes at Mombasa, by Mr. R. J. Cuningham, F.Z.S. In a brief note by Mr. C. M. Hobley, C.M.G., the editor of the journal, reference is made to the eating of considerable quantities of a soft, grey aluminous rock, a kind of steatite imported from India, by Indians and others resident in Mombasa. The note has some bibliographical references on the subject of geophagia.

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—A public appeal for funds in aid of this institution has been made by Mr. James Cantlie in the *Times*. The good work done at 22, Chenies-street, W.C., is familiar to most medical practitioners in and around London, and it would be a public misfortune if this institution, which was founded and generously supported by the late Sir Jonathan Hutchinson, should come to a standstill through lack of money. The sum urgently needed at the moment is, we understand, £5000, and of this £2000 have been advanced by medical men. Subscriptions may be sent to Mr. Cantlie at 140, Harley-street, London, W.

BARTHOLOMEW MOSSE AND THE ROTUNDA HOSPITAL.

THE Hôtel Dieu of Paris had a maternity department as far back as the thirteenth century, but it was not until the middle of the eighteenth century that the earliest of these institutions in the British Isles took its rise in the keen sympathy of a medical practitioner with the miseries of the poor. Bartholomew Mosse was the son of an Irish clergyman, the rector of Maryborough, Co. Down, and was born in 1712. After serving his apprenticeship with John Stone, surgeon, of Dublin, he was released from his indentures with a satisfactory certificate in 1733, and at the same time was pronounced "well qualified to practise the art of surgery" after a personal examination by the Surgeon-General, John Nichols. He took medical charge of troops going to Minorca in 1738. He then travelled in "England, France, and Holland, and several other parts of Europe," to perfect himself in surgery and midwifery. Returning to Dublin in 1742 he was admitted a Licentiate of the King and Queen's College of Physicians. On establishing himself in the practice of midwifery, his attention was drawn to the condition of the poorest class of lying-in women, exposed in garrets to cold or in cellars to damp, without attendance, medicine, or even food. The Dublin hospitals had no accommodation for lying-in patients at that time, nor, indeed, had any hospital in the British Isles, for the newly founded Middlesex Hospital did not start its lying-in wards—whence sprang the London Maternity Hospital, now the British Lying-in Hospital—until 1747. Mosse therefore felt that a new kind of hospital devoted to caring for poor women during parturition was needed, and at once set about obtaining the necessary funds to establish such an institution. On Friday, March 15th, 1745, he was enabled to open "an Hospital for Poor Lying-in Women in George's Lane, facing Fade Street," to which the first patient was admitted that very evening. It was a three-storied house of considerable size, containing four beds on each floor, and having an adjoining outbuilding in which were one large and two small wards.

The real difficulty, however, was to find means of adequate support. Mosse faced this by producing plays and oratorios, taking tickets in lotteries, and other entertainments to supplement private benefactions. In this he succeeded, and the new institution, in spite of much opposition and many difficulties, pecuniary and other, justified itself by its results. Mosse was thus emboldened to take the first step towards a more spacious and ambitious scheme, which might well have dismayed anyone with less force of character and perseverance. In August, 1748, he took upon himself the responsibility of a lease for three generations of four acres and one rood of land on the north side of Great Britain-street, whereon to erect a lying-in hospital for at least 150 patients. He first laid out the grounds as public gardens, after the model of the Vauxhall Gardens, London, upon which he expended some £2000 of his own money, walling-in the grounds, erecting an orchestra, concert room, and coffee room, and planting trees and shrubs. Here he organised a series of entertainments with a view to producing a yearly income for the benefit of his charity. His expectations were not disappointed, and in fact to this day the hospital still draws a considerable income from the entertainment rooms and pleasure grounds established by him.

The foundation-stone of the new hospital was laid on July 9th, 1751. In December, 1756, a Royal Charter was granted. Mosse was appointed Master for life, and shortly afterwards a parliamentary grant of £6000 was paid over to the governors, less £180 deducted at the treasury in certain imposts.

Nearly a year later a committee of the Irish House of Commons gave a further grant of £6000 for the completion of the hospital, and a benefaction of £2000 to "Bartholomew Mosse, Master of the said Hospital, as a reward for his great Care and Diligence in Attending the Lying-in Hospital in *George's-Lane*, thirteen years, and superintending the new Hospital in *Great Britain-Street* nine years and a half, by which he hath greatly injured himself in his profession, and hurt his Family in their Circumstances, having never received any reward." Thus, after the overcoming of stupendous difficulties the New Hospital, from designs by the great contemporary architect, Richard Castle, was opened on Dec. 8th, 1757, 12½ years after the establishment, as a private venture, of the original hospital in George's-lane. At the time of the transfer from the old to the new hospital Mosse was able to report that 3975 women had been delivered in the old hospital, with a maternal mortality of 1·10 per cent., "mostly of fever several days after they were safely delivered," at a total cost of £3913 13*s.* 0¾*d.*

Mosse's tenure of office in the new establishment was brief, for he died on Feb. 16th, 1759, in the forty-seventh year of his age, and 13 years and 11 months from the opening of the old hospital in George's-lane, and was succeeded in the mastership by Dr. (later Sir Fielding) Ould.

In Mosse's will he is described as a "Doctor in Physic," and elsewhere as M.D., but no evidence is forthcoming to show where he graduated. His name does not appear on the rolls of any Irish, English, or Scotch University, or on those of Leyden, where so many men of his age took their degree.

In a recent work[1] by Dr. T. Percy C. Kirkpatrick and Dr. Henry Jellett, the present Master of the hospital, from which most of the foregoing information is taken, it is stated: "We find no trace of self-seeking in any of the work done by Mosse. His hospital was everything, and though he claimed honour as its founder, it was only through it and its success that he made any such claim. There is no evidence that he ever used the hospital for his own advantage, either in the way of making money by it, or to advance his professional reputation. Indeed, for the hospital he seems to have sacrificed his entire income and to have abandoned any hope of rising to professional eminence." But little evidence is forthcoming as to his private life, but such as there is seems to proclaim him a good husband and father and a generous friend.

The further history of the hospital and its vicissitudes is recorded at length in Dr. Kirkpatrick's handsome book. Reference, however, may be made here to one particular period in the "sixties," when owing probably to the progressive mortality from puerperal fever, which occurred *pari passu* with the septicæmic condition of surgical wards in hospitals everywhere, there was a marked diminution in the number of patients cared for, which fell to 9181 during the mastership of Dr. McClintock (1854–61), as against 13,741 in the preceding seven years, though the mortality-rate was higher. Under Denham (1861–68) it fell still lower, to 7786. It was at this point that the general outcry against hospitalism reached its culmination, when there were many, as our own columns during that period testify, who questioned whether large hospitals in general, and lying-in hospitals in particular, ought not to be abolished, and Dr. Evory Kennedy, a former Master, in a letter to the board of governors, dated Oct. 28th, 1867, urged "that the time has arrived in which, like all human institutions, progress and changing circumstances have produced such an influence upon it that neither the intentions of the founder, the wants and just rights of the public, nor the claims of humanity, by securing the greatest preservation of life, are accomplished by its instrumentality."

Kennedy's suggestions were negatived, but in the following year he read a paper before the Dublin Obstetrical Society, in which he opened up the whole subject of the hospital treatment of lying-in women. After a discussion lasting 11 nights, while Kennedy's figures for maternal mortality in large and small maternities respectively were not discredited, his suggestions for the abolition of the hospital were not received—fortunately, as it proved, for the sun of Lister's work was rising, and as it became elevated in the heavens it gained power to dissipate the mists that obscured the true significance of the phenomena. Never was the beneficence of hospitals, and particularly of lying-in hospitals, more clearly apprehended than it is at the present day.

[1] The Book of the Rotunda Hospital. An illustrated history of the Dublin Lying-in Hospital from its foundation in 1745 to the present time. By T. Percy C. Kirkpatrick, M.D., M.R.I.A., Fellow and Registrar of the Royal College of Physicians of Ireland. Edited by Henry Jellett, M.D., F.R.C.P.I., Master of the Hospital. London: Adlard and Co. 1913. Pp. 222. Price, in various bindings, 16*s.*, 18*s.*, 30*s.*, and 32*s.* The proceeds of the sale will be devoted to the funds of the hospital.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 14, 1914.

The Working of the National Insurance Act.

WE publish this week in another column an important memorandum dealing with the case of those persons who desire to make their own arrangements, under Section 15 (3) of the National Insurance Act of 1911, with a view to the receipt of medical benefit. The members of the insured public who fall under this category are sharply divided into two classes—those who desire not to select a medical practitioner on the panel, but to make a private contract with a medical man; and those who desire to employ the services of unqualified or unregistered persons. The memorandum takes note with shrewdness and knowledge of the real position, and of the fact that an almost negligible number of persons wish to obtain so-called medical benefit through the administration of persons who are not medical men, and it seems to us unlikely that Insurance Committees will be willing to allow this danger to spread. We trust that our readers will keep a right medical view of affairs steadily before all such members of the public as by their position upon various Insurance Committees are likely to give practical assistance.

It seems to us particularly important that at the present juncture medical men should take every reasonable opportunity of explaining to intelligent laymen the difficulties in which the medical profession has been placed by the extension of contract service, as there is too prevalent a belief that the increase in income, which some practitioners on the panels are receiving, is a panacea for all the ills that they, as well as other practitioners, are experiencing. The situation of the medical profession is distinctly an anxious one in relation to public affairs. We may be certain that it could be paralleled by comparison with that which has obtained at other epochs, for in the nature of things every alteration in the position of the medical practitioner, when it has followed upon new legislation, has been an experiment performed by those who did not know. There is not a series of mysteries involved in our professional life, but it is a life that has to be led before its objective and its social relations, its pleasures and its pains, can be fully understood. The representation of the medical profession in Parliament has always been very small, and when medical members have possessed any hold over the reason of the assembly they have generally owed allegiance to a party, causing their testimony to medicine to be received with reservation; and it is difficult to see how anything else can be expected. Laws which modify the circumstances in which the benefits of medicine are distributed to the community might be more agreeable to the medical profession if they were made from the beginning by medical men, but it is certain that, if by any combination of events such laws were passed, they would be subjected later to great modification, allowing that they were criticised only with justice from the public point of view. The probability is that a fairer general measure in all political departures would, as a rule, be arrived at from the beginning by a Parliament representing general opinion. But the difficulty is that any amendments found necessary by the particular branch of the public chiefly affected must be hard to come by, as the onus of proving the need for further legislation would be upon a section of the community with business interests to serve and with only a comparatively small voting strength. Medical men are not here the only class alluded to, but they are the class most likely to suffer from ill-informed law-making because their calling is so delicate a combination of art, business, and philanthropy. Therefore, while they possess no more claim than any other class to frame laws for the community, it is in their case particularly necessary, before legislators attempt to solve problems with the implied assistance of the medical profession, that no endeavours should be spared towards ascertaining what are medical opinions, why they are held, and what is their equitable and logical strength. This precaution was notably absent from the preliminary stages of the National Insurance Bill, and it behoves all medical men to see, when any revision of the existing arrangements comes under the consideration of Parliament, that the medical view is adequately and temperately expressed.

A warning note has been sounded in the *British Medical Journal* to the effect that if the present system of administering medical benefits is found to threaten the financial stability of the Approved Societies new arrangements will have to be made by the Commissioners with the medical profession. The suggestion is, of course, that less money will be paid to practitioners on the panel, a danger ahead which has been already alluded to in these columns. If the Approved Societies obtain the administration of medical benefits, on the plea that only in this way can insurance of the nation against the results of sickness be economically carried on, there will be a return to conditions which have been demonstrated over and over again to be entirely unsatisfactory, and sometimes humiliating to the medical profession. We are drawing attention a long way ahead to a difficulty that is only possible and may not arise, but it is well to be forearmed. The financial standing of some of the Approved Societies will be better known in a little time, while it must be remembered that there is no need for them to hoard the contributions which they receive year by year as stewards. Their

members would regard with equanimity the fact that the available money was spent on providing the best form of medical benefits obtainable, and are not likely to support the secretaries and treasurers in any scheme for securing these benefits on the cheap. But it is the officers of the Approved Societies who will be the spokesmen, and the medical profession may find that considerable pressure is being put upon them to return to their former position of service under those officers.

Declining Death-rates.

AMONG the questions raised on the recent publication of the Annual Report of the Medical Officer of the Local Government Board for 1912–13, already reviewed in our columns,[1] that of declining death-rates in England and Wales has received special public attention. In the year 1912 the death-rate in England and Wales from all causes was as low as 13·3 per 1000, the lowest rate yet recorded, a decline of no less than 27 per cent. when compared with the mean yearly rate of a period as recent as 1891–1900. This decline, though perhaps more conspicuous in respect of the mortality of infants and the deaths from certain infectious diseases, has not been limited to these groups; speaking broadly, it may be said that the recent rates of general mortality indicate both an increasing prolongation of life into old age and a greater degree of escape from death throughout all the stages of youth, adolescence, and middle age. Mortality rates, of course, are not necessarily indicative of national healthiness or of the extent to which particular forms of illness are prevalent. With appendicitis, for example, if common indications are to be believed, there has been for some time past an actual and considerable increase in prevalence after all allowance has been made for better diagnosis and for the different names under which this affection was formerly described. The simultaneous development of successful surgical treatment, however, prevents the official mortality returns from giving any real clue to the extent to which the disease prevails or from showing how fast it is increasing. Or, to take another illustration, we might refer to the large amount of temporary invalidism that is apparently being caused at the present time by sudden attacks of "gastric" illness attributed to the infection of influenza. As in the case of appendicitis, the examination of mortality figures does not help towards general or local investigation of the prevalence or causation of a widespread illness of this nature. While, however, the distinction between reduction of mortality and decline in sickness is an obvious one and needs to be remembered, it is difficult not to believe that the general fall in mortality as a whole connotes diminishing invalidity and increased healthiness. In the case of infants and children the association is particularly close, and the considerable fall in the death-rates at young ages in recent years is no doubt to be connected with the greater consideration now given to the individual life, with the early detection and treatment of ailments which in former years would have been neglected until they became formidable, and in large measure also with the greater healthiness which has resulted from the improved conditions of nurture and environment of children.

As said above, the mortality figures for most of the infectious diseases in 1912 show striking reductions when compared with the average experience of 1891-1900. The decline in the case of measles is 16 per cent.; from scarlet fever 66 per cent.; from whooping-cough 40 per cent.; from diphtheria and croup 57 per cent.; and from enteric fever 75 per cent. The mortality from typhus is now practically nothing, and in the absence of any considerable epidemic of small-pox the death-rate from that disease is at present negligible. The chief causes which have led to these reductions are not identical in the case of each disease. Those who have special experience of diphtheria, we believe, would ascribe the fall rather to the curative power and increased use of antitoxin than to any decrease in its prevalence or change in its intrinsic severity. The fall in the scarlet fever rate is held to be attributable only in a minor degree to improved treatment or to lessened prevalence, and is set down to a distinct change in its clinical character, associated with a much milder type than that met with 20 or 30 years ago. By contrast the great reduction of enteric fever mortality is undoubtedly due to a definitely lessened prevalence, which has followed the purification of public water-supplies, prevention of food contamination, and other sanitary measures. Nevertheless, it seems possible that in some at least of the infectious diseases common factors may be steadily at work to diminish virulence, including possibly the much greater intercommunication of the present day which may promote the spread of mild or unrecognisable infections which confer some degree of immunity.

In the case of tuberculosis the mortality from all forms in 1912 is 32 per cent. less, and from pulmonary tuberculosis 25 per cent. less than the average rate for 1891–1900. In respect of phthisis the fall continues the steady decline which has been taking place since 1853, and has increased in its rate of fall since 1867, when the deaths ascribed to phthisis were relatively more than twice as many as they are now. The decrease which has set in during the last six or seven years in tuberculous diseases other than phthisis is noteworthy, as previously these rates tended to be stationary. Notwithstanding the immense amount of study which has been given to this disease, it is almost impossible to assign values to the different causes which have led to the steady and continuous decline in the mortality from tuberculosis. The effects of migration, "urbanisation," exposure

[1] THE LANCET, Jan. 31st (p. 339) and Feb. 7th (p. 408), 1914.

to infection, race, and heredity, the relation of human and bovine tuberculosis, and the possible acquisition of immunity by infection in early life are a few among the considerations to be taken into account. Readers of our issue of Jan. 31st will have noted in Dr. W. CECIL BOSANQUET'S lecture on "Tuberculosis as an Infective Disease," evidence both of the difficulties of the problem and of the helpfulness of the conspectus of the present position which is there given. It would probably be difficult to exaggerate the importance of the part played by changes in the social condition of the population of this country during the past 40 or 50 years, including alterations in housing and diet, in reducing the prevalence and fatality of tuberculosis. In the latter part of this period also the increase of medical knowledge and the improvements made in treatment must have had a great effect in the same direction. Although many years have elapsed since sanitarians began to press for more light and air about dwellings and the prevention of atmospheric impurity, it is not so long since current medical treatment of consumptive patients still permitted the respirator, the shut bedroom, and other devices which are now regarded as disastrous. A further acceleration of the rate of decline in tuberculosis mortality by the preventive and curative measures which the public authorities have now begun so energetically to undertake is one of the most hopeful prospects of medical science, and the fact that there are still over 35,000 deaths annually from phthisis alone in England and Wales is enough to show what remains to be achieved.

The Notification of Ophthalmia Neonatorum.

THE Local Government Board, by an Order issued at the end of last week, has made ophthalmia neonatorum a notifiable disease. Heretofore notification of this disease has only been compulsory in those administrative areas in which the Local Government Board had sanctioned the procedure. In the year 1912 there were 216 sanitary districts which had availed themselves of this opportunity, and during last year this number was considerably augmented. Since March, 1911, by an Order extending the provisions of Section 55 of the Public Health (London) Act the notification of ophthalmia neonatorum by medical practitioners and midwives has been made compulsory, and during that year 673 cases were notified, a number which represents an incidence of 0·843 per 100 births. During the year 1912 approximately 700 cases were notified in London, and of these 5 cases resulted in complete blindness in one or both eyes. At the meeting of the British Medical Association held in London in 1910 one of the subjects for discussion was the administrative control of ophthalmia neonatorum, and in opening this discussion Dr. GEORGE REID, the medical officer of health of the county of Staffordshire, made out a very strong case for the compulsory notification of the disease and for its free treatment at the public expense. He claimed that the cost of educating a blind child was approximately £500, while the cost of educating a child who had ordinary vision was no more than £50. As the cost of education usually fell on the public authority, it was clear from the number of cases of blindness which annually resulted from the disease that there would be a handsome offset to the expenditure incurred by prophylaxis and treatment if any cases of blindness were thereby prevented.

The experience of London, Liverpool, and Staffordshire prove that the incidence of blindness is very small if cases of ophthalmia neonatorum are taken in hand sufficiently early and are treated in accordance with approved methods. Whether prophylaxis should go the length of instilling a drop of protargol solution into the eye of every new-born infant is a question which still vexes the minds of some authorities, but there can be no doubt that all cases of ophthalmia with a purulent discharge should be treated drastically under medical supervision from the start. It has been calculated that the average cost of treating such cases in Staffordshire—a cost which includes in many cases the long-continued services of fully trained nurses—is about £3 1*s*. 6*d*.

The action which the Local Government Board has taken in making this serious infective disease compulsorily notifiable in every sanitary district in England and Wales will be strongly commended by all public health authorities, and it is particularly gratifying that the definition of the complaint—namely, as "ophthalmia with a purulent discharge from the eyes of an infant commencing within 21 days from the date of its birth"—leaves no loophole for prevarication or evasion in those cases in which the bacillus of Neisser has not been, or cannot be, demonstrated by bacteriological methods. Although probably the consequences are not serious, there can be no doubt that pathological admissions, such as that which the notification of ophthalmia neonatorum would entail, must be somewhat hard to come by, if such admissions in any way serve as *primâ facie* evidence of unskilful practice. Such cases have, however, been known to occur, the responsible parties sheltering themselves under the plea that the discharge from the eyes, though purulent, was not due to the gonococcus.

The Royal Commission on Venereal Disease which is now sitting will certainly have to pronounce on the advisability or the reverse of the compulsory notification of syphilis and gonorrhœa, and more than one of the Government departments has already been memorialised to include both diseases among the number of those notifiable. The argument that the compulsory notification of venereal disease might defeat its own purpose by delaying or interfering with medical treatment through the fear of disclosure of the

nature of the complaint may or may not be sound, but it seems that in the compulsory notification of ophthalmia neonatorum we have a most effective means of acquiring a knowledge of the incidence of at least one of these diseases without any of the objections to which the direct notification of the responsible parties might possibly conduce.

Annotations.

"Ne quid nimis."

THE UNIVERSITY OF LONDON.

THE Departmental Committee on the University of London, appointed to recommend, after consultation with the bodies and persons concerned, the specific arrangements and provisions which may be immediately adopted in order that effect may be given to the scheme of the Report of the Royal Commission on University Education in London, have now resumed their sittings. The committee have invited the observations of the Senate upon the proposals of the recent Royal Commission with regard to the admission of external students to the examinations of the University for degrees, regard being had to the principles upon which the report is based. The committee would also be glad to receive not later than March 14th reasoned statements bearing upon these proposals from other bodies and persons concerned.

MEDICINE AND POLITICS IN ITALY.

"TO-DAY the extension of the suffrage," writes an Italian correspondent, "has enlarged the electorate from about 3,000,000 to 8,000,000, and of these latter a large proportion are analfabeti, that is, can neither read nor write. There are questions before the country of even greater urgency than the riveting of Italy's foothold on the Southern Mediterranean seaboard, and these are education and, in closest connexion with it, the public health. That so large a proportion of the electors should be 'analfabeti' is a reproach to Italy and her legislators which cannot be too soon wiped out—a state of things appealing more sensibly to her *amour propre* than colonial extension or even military prestige. Not less urgent and not less vital for her rehabilitation and self-respect is the improvement of her hygiene, a necessity now more than ever borne in upon her, and explaining not only the large proportion of medical men among the candidates at the late elections, but the recent accession of distinguished consultants to her Upper Chamber. The Italian Senate, indeed, stands pre-eminent throughout Christendom for the number of physicians and surgeons it can boast of—men who, while professional men devoted to their calling, have not forgotten that they are also citizens, citizens, moreover, of a nationality comparatively new in the State system of Europe. Numerous as they already were in the Senate, the Premier has added, as your Italian correspondent has already reported, still more to their strength, and in the 29 new nominations has made three who are, each of them, eminent in medical practice and research. Dr. Ettore Marchiafava, whose name occurred so frequently in the consultations held during the Pope's grave illness last spring, is one of these, and not only the profession but the public at large are at one in recognising the justice of his promotion to a legislature before which the question of medical education and, with it, those of scientific research and hygiene, press forward for consideration and solution. His record as professor of comparative anatomy at the Sapienza as well as his intervention in the crusade against malaria are of themselves a "title-deed" to the honour just conferred on him. The second on the list, Dr. Carlo Forlanini, has an equally valid claim to the distinction of Senator. Born some 66 years ago at Milan, and professor of physiology and clinical medicine at the Lombard University (Pavia), he has won an authoritative position in the domain of public health, particularly in the legislation against tuberculosis, while his clinique has been frequented by students from other seats of learning for his special mode of dealing with pneumothorax described some three years ago in THE LANCET. The third consultant now promoted to the Upper Chamber is Dr. Gerolamo Gatti, who holds with much acceptance the chair of surgical pathology in the Florentine Institute, and, while devoted to clinical research and professional teaching, has found time to study social questions, particularly those relating to the condition, moral and physical, of the agricultural labourer. A convinced Socialist, though not enrolled in any of its numerous sects—being, indeed, a trenchant critic of the Marxist dogma and practice—he is a representative of the interests of the *democrazia rurale*, beginning with the physical development of the children and directing, *ad hoc*, the Hospital for Surgical Pædiatry in Florence. Younger than the majority of his professional brethren in the Senate, he adds to their experience an energy all his own and will contribute effectively to the consummation of that policy, known as socio-medical, which is destined for many years to form an important factor in Italy's legislation."

MODERN LEPROSY.

SANITARY authorities in various parts of Europe are now occupying themselves in trying to check the spread of leprosy, recently believed to be almost extinct. The incidence of the disease is increasing surely though slowly and precautions can no longer be neglected. In France especially, as appears in our Paris correspondent's letter (p. 491), considerable disquietude prevails, and legislation in the matter is being invoked. A curious study containing certain considerations, interesting at least as hypotheses, has been recently published by Dr. Blendeau, who holds that the disease had existed in Europe before the Crusades, but had become attenuated by a sort of racial vaccination. In Palestine the Crusaders came into contact with another variety of the same microbe, for which they afforded an entirely new culture medium. This was the grand leprosy of the Middle Ages, brought back by the Crusaders to their own lands, where the oriental bacillus caused the most frightful ravages. Then, in a similar manner, its pathogenic power also diminished, and Europeans once again became refractory to the disease. The present reintroduction of leprosy is probably due to the more frequent and rapid communication in recent decades with the Far East. About 40 years ago the Chinese carried leprosy into Polynesia, where it had been up to that time unknown. The natives, who afforded a new field for it, contracted it rapidly and contaminated the

whites, who in their turn brought it back to Europe. This Polynesian bacillus appears to be of a dangerous character, for now Europeans who have become leprous there and have returned to Europe convey leprosy to European countries of so virulent and contagious a character as to call for vigilant and strenuous protective measures.

TUBERCULOUS PERITONITIS IN GIRLS SIMULATING DISEASE IN THE INTERNAL GENITAL ORGANS.

IN the *Australasian Medical Gazette* of Dec. 13th, 1913, Mr. A. J. Nyulasy has reported two interesting cases of a rare form of tuberculous peritonitis commencing in the Fallopian tubes which simulated other diseases. Both occurred in girls, aged 17 years, and in the first case neither the family history nor the appearance of the patient suggested tuberculosis. A healthy looking girl was admitted into the Perth Public Hospital complaining of pain in the iliac fossæ which was of several years' duration and increased during menstruation. With the onset of menstruation, five years before, leucorrhœa began and had continued ever since. The abdomen was much enlarged, and dulness extended upwards above the umbilicus and higher on the left side than the right. The dull area was indefinitely fluctuant. The hymen was unruptured, and the uterus was displaced to the right. A tense irregular mass was felt in Douglas's pouch, and pressure on the abdomen above was transmitted to the examining finger. The temperature was somewhat raised, but the general condition was good. Ovarian cyst was suggested. On opening the abdomen the omentum was found greatly thickened and adherent to the abdominal wall, and forming the anterior wall of a fluctuating "cyst," which was tapped, and yielded about six pints of straw-coloured fluid. On further separating the omentum from the abdominal wall tubercles were seen thickly studding it and the parietal peritoneum. The anterior wall of the "cyst" was found to consist of thickened omentum and a layer of fibrinous material. Posteriorly the cyst wall was formed by the rectum and intestines. The fibrinous material was removed with difficulty, and the involved area was then seen to be studded with tubercles, many of which were caseous and broken. The Fallopian tubes were thickened and enlarged, especially at the outer ends, which were fully two inches across, and they contained much fluid caseous matter. The ovaries appeared to be normal. Both tubes and the greater part of the omentum were removed, caseous matter was cleared away, the pelvis was filled with saline solution, and the wound was closed without drainage. During convalescence a tuberculous sinus formed in the upper end of the abdominal wound and was scraped with success. Two years later the patient was in good health. In the second case a girl, aged 17 years, was admitted complaining of abdominal pain of two months' duration, the hæmorrhage having continued since the last menstrual period five weeks previously. She had the delicate pink colouring and fine hair suggestive of tuberculosis, but was not badly nourished and the family history was good. The lower abdomen was tender and somewhat distended. The hymen was unruptured and a rather firm mass was felt in Douglas's pouch, apparently covering an anteverted uterus. On opening the abdomen the omentum was found adherent to the parietes and the parts beneath. When it was separated bright blood appeared in quantity, suggesting ectopic gestation. When the blood had been mopped up grey translucent tubercles were seen studding the parietal peritoneum, omentum, and a mass of intestines densely adherent to the uterus, tubes, and broad ligaments. The adherent intestines were roughened, congested, and sodden-looking. Separation of the adhesions was thus not only difficult but dangerous. The uterus could not be brought clearly into view, but was felt to be small and irregular in consistence. A way was at length made behind it down into Douglas's pouch, where the left tube was felt enlarged and densely adherent to the broad ligament beneath adherent intestines. It was considered unjustifiable further to attempt removal of this tube. The right tube was found much enlarged and very adherent to the broad ligament and to overlying intestines. The end of the tube could be felt in Douglas's pouch, and on separating it some ounces of pale yellow pus oozed up. When this had been mopped out the free end of the tube and an apparently healthy ovary could be partly brought into view. On account of the friable condition of the involved intestines and the extent of the adhesions it was deemed inadvisable to proceed further in an attempt at salpingectomy. The operation area was dried out, a pint of saline solution was run in, and the wound was closed without drainage. The patient was placed in Fowler's position and saline solution was given per rectum. In a couple of days she was taken into the open air and did remarkably well. When discharged some weeks later she had put on weight and was looking and feeling well.

COÖRDINATION AMONG LONDON HEALTH ASSOCIATIONS.

As the result of a conference held at the Mansion House in July of the year before last, at which representatives of Government departments, public authorities, and voluntary agencies concerned with the health of the metropolis were present, a body known as the "Central Health Committee (Voluntary) for London" was constituted. This committee consists of 23 members, and meets in the offices of the Local Government Board. As a result of its labours a report, which contains brief particulars of some of the voluntary societies carrying on health work in London, has been drawn up, and this report has now been printed and circulated by the Local Government Board. Copies of it have been sent to the mayor of every metropolitan borough and the chairman of every metropolitan board of guardians. An official letter which accompanies the report emphasises the advantages to be derived from coöperation between local authorities and voluntary workers. It is suggested that in each borough the mayor and the chairman of the guardians should convene a conference for the purpose of formulating some scheme to secure such coöperation. The importance and value of mutual understanding and assistance on the part of voluntary societies and local health authorities are unquestionable, for overlapping is thus prevented, and unstopped gaps are brought to notice. It is therefore gratifying to find that the Local Government Board is cognisant of the need for coördination and prepared to encourage it. The actual report itself, which stimulated the Board to suggest that the voluntary workers should undertake the organisation involved, is a somewhat disappointing document. It does not pretend to be exhaustive, and is

in fact far from complete. It is said to be the result of much work, but there is no internal evidence of anything of the sort. Its publication by the Local Government Board is a proof that the value of coöperation in health work is officially recognised; but it is not the beginning of such coöperation. As a matter of fact, local voluntary agencies and local branches of central societies do actually coöperate with one another and with the borough health authorities. The extent of such inter-communication varies in different boroughs and is seldom quite as great as it might be with advantage, but it is nowhere non-existent. While prepared to give due credit to every effort made to increase desirable coördination in health work we are not especially sanguine that progress will be much stimulated either by the letter from the Local Government Board to the metropolitan mayors or by the incomplete compilation which it covers.

THE RÔLE OF SYPHILIS IN MENTAL DEFICIENCY AND EPILEPSY.

IT is well that the attention of the medical profession should be directed to a recent paper in the *Journal of Mental Science*[1] by Dr. Kate Fraser, assistant medical officer, Govan school board, and Dr. H. Ferguson Watson, medical officer of H.M. prison, Peterhead, lately assistant medical officer, Renfrew District Asylum. In pre-Wassermann days syphilis was regarded as a relatively unimportant factor in the production of mental deficiency. Shuttleworth, for instance (1888), examined 1000 cases by clinical methods only, and found evidence of syphilis in ten. Even in the new edition of Allbutt and Rolleston's "System" (1910) Shuttleworth and Fletcher Beach state they could trace inherited syphilis in only 1·17 per cent. of their cases. With the Wassermann reaction to help us, however, many cases of mental deficiency have been shown to give a positive result which present no clinical symptoms or signs of syphilis. Dr. Fraser and Dr. Watson are the first, we believe, to carry out a general systematic inquiry on this subject in this country, and they emphasise the necessity in all cases of obtaining the family history, making a clinical examination, and performing the Wassermann test. The blood-sera of 99 mentally defective and epileptic children, mainly attending special schools, were tested by Dr. Fraser. A positive reaction was obtained in 44·9 per cent. of 89 cases of mental defect. Of 34 cases of epilepsy among the number, presenting varying degrees of mental defect, positive results were obtained in 15; 15 more gave a negative reaction. Members of the families in 13 of these negative cases were also tested by the Wassermann reaction, and in no fewer than eight instances the test was positive in one or other member. One or two illustrations of the importance of this finding may be given. The serum of a defective girl gave a negative reaction; the mother was a well-developed, healthy woman, who said she had never had a day's illness in her life, nevertheless her blood gave a positive Wassermann reaction. A mentally defective boy and his father both gave negative results, while the boy's twin sister and his mother both gave positive results. In one family a boy and two girls were examples of lesser degrees of mental deficiency, but their sera, tested by Wassermann's methods, were negative. Their mother complained of loss of memory, and was dirty and untidy. Her serum was positive. It should further be noted that only in eight of all the positive cases were stigmata of congenital syphilis present. Dr. Watson examined the serum in 105 cases of mental deficiency, all but six of whom were under 15 years of age. Only 13·4 per cent. showed stigmata, yet no fewer than 51, or 48·5 per cent., gave a positive reaction. Both investigators employed the same technique, and in their paper they demonstrate the extreme care with which their results were tested. As a matter of fact the results obtained by the two independent investigations are practically identical. Out of 204 cases syphilitic infection was present in 123, or 60 per cent. The conclusions drawn by the authors are expressed somewhat as follows: syphilis is the causative factor in more than 50 per cent. of cases of mental deficiency, of whatever degree of severity. Investigation of the families in which defective children appear shows that syphilis is associated with a still higher percentage of cases than is ascertained by the examination of the patients alone. Only a very small percentage of the cases under discussion show external evidence of congenital syphilis, even where the family history and the examination of other members of the family afford practically conclusive evidence of the existence of syphilitic infection. The results of the authors show a larger proportion of positive cases than those of any previous observer. It is important to bear in mind, however, that, as has been demonstrated by others, the percentage of positive reactions diminishes rapidly after the sixteenth year; the cases investigated by Dr. Fraser and Dr. Watson were mainly between 1 month and 14 years of age. The paper is a valuable contribution to the study of the etiology of feeble-mindedness, and it appreciably widens the field of research.

[1] October, 1913.

A RARE COMPLICATION OF PHIMOSIS.

IN the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of Jan. 25th Dr. H. Griewank has reported a rare complication of phimosis which occurred in a native of Senegal, who came under observation at the age of 25 years. About the age of 10 years he was circumcised by some native operator, according to the custom of the country. According to the patient the operation was incompletely performed and the preputial stump became inflamed and considerably enlarged, while at the same time the urine was passed with more and more difficulty. At each micturition the urine formed a tumour which was slowly emptied through a punctiform orifice. In the end the preputial pouch thus formed was never completely emptied, and a rounded tumour formed at the end of the penis and gradually enlarged. On examination a spherical tumour of the size of the fœtal head at term hung from the end of the penis. On its surface was a well-marked venous plexus. On its right side was a small orifice from which drops of urine, with a strongly ammoniacal odour, constantly flowed. The penis was slightly enlarged. On palpation the tumour was tender and resistant, and on percussion it was dull. On the left side the inguinal glands could be felt. Catheterism of the urinary orifice with the smallest instrument was impossible. Exploratory puncture with a Pravaz syringe yielded turbid urine with a strong ammoniacal odour, and the sensation of the needle striking against a hard body, such as a

calculus, was felt. The general health was excellent. Almost complete preputial atresia, stagnation of urine between the prepuce and glans, decomposition, and formation of calculi were diagnosed. An incision was made at the most dependent part of the tumour; it passed through greatly hypertrophied and chronically inflamed tissue about 3 centimetres thick. Numerous small calculi of a yellowish-white colour were found filling the whole space between the prepuce and glans. They were removed, circumcision was performed, and the case ran the ordinary course. The calculi removed weighed 540 grammes. They were generally in the form of a calotte, convex on one side and concave on the other. The largest were of the size of a small haricot bean and weighed 40 centigrammes; the smallest were of the size of a lentil and weighed about 20 centigrammes. They almost all contained a hard nucleus, around which was a more friable deposit. Chemical analysis showed that they were composed of calcium and ammonium-magnesium phosphates.

ACCIDENTS FOLLOWING THE TRANSFUSION OF BLOOD.

IT is generally supposed that transfusion of human blood is an operation without ill-effects, but a considerable number of cases in which hæmolysis or agglutination of the donor's blood corpuscles occurred have been recorded, and some have been fatal. Delirium, jaundice, and, in severe cases, hæmoglobinuria were the symptoms. In the *Journal of the American Medical Association* of Dec. 13th, 1913, Dr. R. Ottenberg and Dr. D. J. Kaliski have published an important paper, in which they show the value of preliminary blood examination in avoiding accidents. Hæmolysis of one human blood by another is a pathological phenomenon which was thought to be especially characteristic of cancer and tuberculosis, but is now known to occur in a great variety of diseases. By means of a modified Wright's capillary pipette Dr. Ottenberg and Dr. Kaliski examined the blood of 128 patients and found it to be hæmolytic for several prospective donors in 17. The diseases in which this occurred were purpura hæmorrhagica, carcinoma of the stomach, carcinoma of the rectum, lymphatic leukæmia, pernicious anæmia, chronic osteomyelitis (due to staphylococcus aureus), and pelvic abscess. In all except two cases the patients' serums were hæmolytic with only some of the prospective donors' blood. In two cases, on account of the desperate condition of the patient, hæmolytic transfusion had to be ventured. In one the disease was pernicious anæmia. The serum of the patient was agglutinative and weakly hæmolytic to the cells of the donor. The transfusion was followed by intense hæmaturia, which lasted 24 hours, during which the hæmoglobin fell from 34 to 31 per cent. instead of rising, as almost invariably occurred in other cases. In spite of the loss of the transfused blood the transfusion apparently had a favourable influence, as the patient improved slowly but steadily during the following month. He returned to hospital eight months later and a second transfusion was done from a donor whose blood was not agglutinated or hæmolysed by the patient's serum. This transfusion was successful; the patient was greatly improved and life was prolonged for a year and a half. In the other case (acute lymphatic leukæmia) the patient's serum sharply agglutinated the donor's cells, but only slightly laked them after three and a half hours in the thermostat. No hæmoglobinuria followed the transfusion, but blood smears showed phagocytosis of red cells by leucocytes in the circulating blood. The patient died 42 hours after the transfusion. Jaundice occurred in only one case and was slight and transient. The absence of hæmoglobinuria in over 100 cases in which hæmolytic donors were excluded shows the value of blood examination. Agglutination, unlike hæmolysis, is not a pathological phenomenon, but occurs between normal human bloods. All human beings can be divided into four permanent hereditary groups sharply separated by agglutinative reactions. When the blood of two persons belonging to the same group is mixed no agglutination occurs. When the blood of two persons of different groups is mixed agglutination either of one by the other or of each by the other always occurs. Human iso-agglutinins are present only in small quantities and can be absorbed by a small number of susceptible cells. When the serum of the donor is agglutinative to the cells of the patient, it will be so diluted on transfusion that little, if any, agglutination will result. When the patient's serum is agglutinative towards the donor's cells the conditions are more favourable to agglutination, but even here it is probable that only exceptionally can massive clumps of agglutinated cells be formed, such as are seen in the test-tube. Only in these cases has phagocytosis of the cells in the circulating blood been observed. Dr. Ottenberg and Dr. Kaliski have seen three transfusions in which the serum of the patient was agglutinative to the cells of the donor, and in two of these the serum was slightly hæmolytic. One was the case of lymphatic leukæmia referred to above. Another was a case of pernicious anæmia. Blood smears made after the transfusion showed phagocytosis of red corpuscles by polynuclear leucocytes. No urine was passed after the transfusion, and death occurred eight hours later. The necropsy revealed extensive phagocytosis of the red corpuscles in the spleen and lymph nodes. Agglutination need not be regarded as a contra-indication to transfusion, but non-agglutinative donors should be chosen if possible. There is an important corollary not given by Dr. Ottenberg and Dr. Kaliski. As the principal danger of transfusion is hæmolysis, and as this occurs only in disease, normal blood can be safely transfused in a case of hæmorrhage.

TUBERCULOUS RHEUMATISM.

THE relation between tuberculosis and rheumatism is a topic which has lately been discussed in many quarters. In THE LANCET for Jan. 3rd we published an interesting case of tuberculous rheumatism recorded by Dr. Nathan Raw, whose investigations, including inoculation experiments on guinea-pigs, clearly proved the tuberculous nature of the rheumatism. Some writers are apt to label polyarthritis as tuberculous when it occurs in the subjects of pulmonary and other forms of tuberculosis. Theirs is the view that various manifestations should, as far as possible, be "hung on one peg," instead of being attributed to more than one primary factor. Dr. Raw considers tuberculous rheumatism very rare. Professor Poncet and his school consider it very common. Several cases have lately been published in which injections of tuberculin provoked great pain and swelling in many joints already the seat of rheumatism, which has accordingly been regarded as tuberculous. At

a recent meeting of the Medicinske Selskab of Christiania Professor Peter Holst discussed the difficulties of correlating tuberculosis with polyarthritis. In 27 cases of chronic and subchronic arthritis he punctured the joints, and injected the fluid thus obtained into guinea-pigs, or he examined it microscopically. None of the nine guinea-pigs thus treated developed tuberculosis. Inoculation into guinea-pigs of glands excised from the neighbourhood of the swollen joints also gave a negative result. Diagnostic injections of tuberculin provoked in almost all these patients fever and general malaise, but with one exception there was no exacerbation of the arthritis. The one patient whose arthritis was affected by 5 milligrammes of tuberculin was a girl, aged 17, whose chronic polyarticular rheumatism had begun as an acute rheumatism. The tuberculin induced fever and the formation of a ganglion over one ankle. Fluid withdrawn from the ganglion contained lymphocytes and was injected into a guinea-pig, which did not develop tuberculosis. While the fluid withdrawn from the joints in this case contained no other cells than lymphocytes, the fluid withdrawn in all the other cases contained numerous polynuclear neutrophil leucocytes and an occasional macrophage. Speaking at the same meeting Dr. Tillisch, of Grefsen Sanatorium, reported four cases of subacute polyarthritis with effusion which he had observed among his consumptive patients. The condition resembled closely that of acute rheumatism, and in one case disappeared after a course of tuberculin. In two other cases swellings of the ankles disappeared spontaneously. In the fourth case the disappearance of the arthritis was followed by purpura hæmorrhagica and nephritis. Dr. Tillisch finds salicylates give relief in such cases, but on this point he stands practically alone. Menzer and many other writers consider salicylates and similar drugs objectionable, as they may mask the condition which requires vigorous treatment with vaccines, including tuberculin. Recent work on tuberculous rheumatism leaves the impression that our knowledge in this field is exceedingly limited.

ETHER IN CASES OF PURULENT PERITONITIS.

ON previous occasions[1] reference has been made in our columns to the intra-abdominal use of ether in France by Dr. Souligoux, Dr. Morestin, and others. Dr. Morestin has systematically used ether in doses of two to four ounces in all cases of purulent peritonitis. All accessible parts of the intestine are first washed with ether, and two to four ounces of pure ether are then poured into the abdominal cavity and left to evaporate. Of course, all primary sources of infection, such as the appendix and so forth, are treated, and if accessible removed. In 31 cases, some of which were apparently utterly hopeless, the results exceeded all expectation. Dr. Morestin speaks favourably of the simplicity of the procedure and the rapid improvement of the patients. He suggests that the ether stimulates the intestinal circulation and acts antiseptically. Dr. Souligoux and Dr. Témoin have each reported two apparently hopeless cases of perforative peritonitis which terminated in recovery. To these Dr. Jeanneret, in a recent number of the *Revue Médicale de la Suisse Romande*, adds the following case treated by him in an Alpine health resort, removal to a hospital being impossible. A boy, aged 7, was attacked by appendicitis on July 20th, 1913. Perforation occurred on July 22nd. Pulse 160, temperature 103°F. Two surgeons having declined to interfere surgically, by July 23rd collapse rapidly increased. The tongue was dry and coated black, and the boy was comatose. The temperature sank from 103° to 96°, while the pulse rose to 180. At 8 P.M. surgical intervention was practised *in extremis*. Laparotomy revealed generalised peritonitis proceeding from a perforated and gangrenous appendix. The appendix was removed and the abdomen drained. Two ounces of ether were poured through the drain into the lower part of the abdomen. The pulse fell to 135, and a slight rise of temperature from 96° occurred. There was no vomiting, and the boy passed a good night. Next day saline transfusion was administered, one pint in the morning and half a pint in the evening. The pulse was now 130, the temperature from 100·5° to 101°. On July 26th the temperature was 98°, the pulse 80, and the boy had his first normal movement of the bowels. Slow improvement took place during the next eight days; then serious symptoms again supervened, the temperature rising to 102° and the pulse to 130–140. Another injection of two ounces of ether was given through a drainage-tube. After this recovery was rapid and definite, and in six weeks the boy was running about again. It would seem that the rapid subsidence of serious symptoms on two occasions in this patient justifies a hopeful attitude in regard to this method of treatment, sufficient at least to justify its more widespread trial.

[1] THE LANCET, March 8th, 1913, p. 723; May 13th, p. 1563; and Nov. 1st, p. 1253.

THE STUDY OF NEW GROWTHS.

WE have received the November–December number of a bi-monthly periodical entitled *Tumori*,[1] published under the superintendence of G. Fichera at Rome. Among other interesting articles there are two which call for special notice. One is an account of a case of cancer of the stomach treated by means of autolytic fœtal products by Dr. A. Bazzocchi at the hospital at Ronciglione. The patient was a woman, aged 48, suffering from abdominal pain after food and wasting. There was a pyloric tumour and dilatation of the stomach with enlargement of the supraclavicular glands on the left side. Extract of fœtal organs, thyroid, thymus, and spleen, was injected on four successive days, and improvement in the patient's condition was at once noticed. A year afterwards her weight had increased from 62 to 71½ kg., no trace of the pyloric tumour existed, and the patient was in florid health. The supraclavicular glands which had been excised showed epithelial nests. The second paper is a contribution to the study of hæmo-angioma of the mamma by Dr. G. Marangoni, of the Hospital at Padua. This kind of tumour is of extreme rarity, and the case reported is interesting on account of the clearness with which the peripheral development of the neoplasm can be followed.

THE Milroy lectures at the Royal College of Physicians of London will be given this year by Dr. F. Shufflebotham, of Newcastle-under-Lyme, who will lecture upon the Hygienic Aspect of the

[1] Tumori, Archivio bimestrale fondato da G. Fichera, Anno III., Fasc. III., December, 1913, Roma.

Coal-mining Industry in the United Kingdom. The lectures will take place on Feb. 19th, 24th, and 26th, and on March 3rd and 5th, at 5 o'clock in the afternoon. Dr. Shufflebotham will pay special attention to the conditions under which coal-miners work, to the causation and prevention of accidents and explosions, and he will deal with the questions of poisonous gases in mines, dust, high temperatures, as well as with miners' nystagmus, beat-hand, beat-elbow, and miners' skin diseases. The lectures will be illustrated by lantern slides, and at the lecture on miners' nystagmus on March 3rd there will be a demonstration on living cases.

IN our last issue we gave preliminary details of the fifth annual session of the Clinical Congress of Surgeons of North America which is to be held in London during the week commencing July 27th next; but we may repeat that temporary offices for the Congress have been established in the building of the Royal Society of Medicine, No. 1, Wimpole-street, W., and inquiries may be addressed to the Secretary-General, Dr. Franklin H. Martin. Sir Rickman J. Godlee is chairman of the London Committee of Arrangements, and Mr. H. J. Paterson and Mr. H. S. Pendlebury are the honorary secretaries. It is expected that 1200 to 1500 surgeons from the United States and Canada will be in attendance at the meeting in London.

THE King has approved the appointment of Mr. John Carswell as a Medical Commissioner in Lunacy for Scotland. — The Secretary for Scotland has appointed, under the provisions of the Mental Deficiency and Lunacy (Scotland) Act, 1913, Dr. Kate Fraser and Dr. James P. Sturrock to be Deputy Commissioners of the General Board of Lunacy for Scotland.

THE TRAINING OF MEDICAL OFFICERS OF PRISONS.

(FROM A CORRESPONDENT.)

IN a letter which appeared in the *Westminster Gazette* of Jan. 22nd Surgeon-General G. J. H. Evatt asked a series of questions regarding the mode of appointment, the professional qualifications, and the conditions of service of the medical men who are employed under the Prisons Department of the Home Office. As some portion at all events of the information which he sought is to be found in such readily accessible sources as the introductory pages of the Medical Directory, we shall hardly do Surgeon-General Evatt an injustice in assuming that his questions were to be regarded as being to some extent of a rhetorical character, and intended not so much to secure the satisfaction of his own doubts as to stimulate the curiosity of his readers. This is, of course, a perfectly legitimate way of attaining what is doubtless an entirely laudable end, but some of his questions which imply an attitude of criticism are not likely to receive answers in a lay journal, even though one which is distinguished by its broad and fair views be in question. If his letter has the effect of provoking intelligent discussion of the many important problems that arise in connexion with the medical aspects of prison work, so much the better.

Surgeon-General Evatt's suggestions—for, in spite of their interrogative form, it is in the light of suggestions that we may regard most of his remarks—were mainly of interest from the conception which they implied of the rôle of medical science in the treatment of the criminal, his main point being a plea for assimilating the position of the prison medical officer to that of the army doctor. In adopting this view Surgeon-General Evatt is really perpetuating a peculiarly mischievous tradition. Not that his criticism of the present organisation of the prison service, as still bearing traces of the army system, is without distinct force, but he has missed the point that it was not because it was bad of its kind that the army system had an evil influence on penal administration. It was because, being designed for the special conditions of an army, it was necessarily unsuited for the needs of a prison. If there is one fact definitely established by the failure of penal administration in the past, it is assuredly the futility of applying military methods to the treatment of the criminal; it is not on the barrack but on the lunatic asylum that the prison should be modeled, and it is idle to look for any real progress in prison reform except through the permeation of the prison system by something approaching the psychiatric spirit. This principle, almost a truism of modern criminology, is so little appreciated that we find a medical man of Surgeon-General Evatt's position considering a knowledge of mental diseases as less important for a prison doctor than the possession of a sanitary diploma. The connexion of crime with mental disability is not in any way recognised by suggesting that medical officers of prisons should receive lectures from specialists on mental disorders at lunatic asylums. It would be of very mischievous effect if this utterly inadequate standard of psychiatric training should be put before the public as satisfying the requirements of prison work, and it is therefore desirable that medical opinion should be at once dissociated from so reactionary a view. The point is of considerable importance, for it touches principles that are essential in the modern conception of the treatment of the criminal. This has, in fact, been so well recognised that the last Departmental Committee on Prisons, which reported in 1897, strongly recommended that practical experience in the treatment of insanity, such experience, that is to say, as can only be acquired by actual asylum work, ought to be an indispensable condition of appointment to the medical branch of the prison service.

This sound principle has not, unfortunately, received statutory sanction in the Prison Act of 1898, though a recommendation to this effect is allowed to remain as a pious exhortation, on the understanding that effect would, as far as possible, be given to it in practice. It is to be regretted that the position was not clearly defined in the Act by making adequate psychiatric training a statutory qualification for the prison service. This would have done much to promote that closer association of prison and asylum work which is so essential to the growth of a scientific criminology, and it would also have helped to make clear to the minds of prison reformers the goal to which their efforts can be most usefully directed. These are matters in which the public mind certainly needs enlightenment, and any such discussion of them as may definitely establish the paramount importance of psychiatry in the treatment of the criminal would be welcomed by the medical profession.

THE HEALTH OF THE ARMY IN 1912.

FROM the report on the health of the British army that has just been issued,[1] it will be seen that while the proportions of admission to hospital and of invalids finally discharged are very slightly in excess of those in the previous year, the death ratio and ratio of men constantly sick in hospital are even lower than in 1911; while in every respect the improvement in comparison with the average health statistics of preceding periods is most marked. The following are ratios per 1000:—

	Admissions.	Constantly sick.	Deaths.	Invalids.
1889–98 ...	997·3 ...	59·85 ...	9·03 ...	15 36
1907–11 ...	498·6 ...	28·75 ...	4·17 ...	9·57
1911	421·1 ...	24·28 ...	3·47 ...	8·09
1912	426·3 ...	23·72 ...	3·26 ...	8·25

If the number of men suffering from trivial ailments and disabilities under treatment in barracks be added to those sick in hospital, the total ratio of sickness only amounts to 31·59 per 1000, little more than half the constant inefficiency before the South African war.

The active strength of the army, amounting to 213,678 warrant and non-commissioned officers and men, may be divided into three groups: about one-half of the force (107,582) are stationed in the United Kingdom; the remainder are either serving in India (71,001) or in the various colonies and dependencies (35,095). As compared with the year 1911, there is a slight increase in the admission ratio for India (547·9 in place of 524·7 per 1000) and for the entire army (426·3, compared with 421·1); and in the invaliding ratio for the colonies (8·95, compared with 6·02); under all other headings the ratios are practically the same or slightly lower.

Recruiting.

The statistics for recruits are now prepared for the "recruiting year" from Oct. 1st to Sept. 30th, instead of for the calendar year as formerly. For the period 1911–12 the number of recruits brought forward for medical inspection, 47,008, was more than a thousand less than in the year 1911, and far below the preceding decennial average of 62,140. This serious deficiency is attributed partly to emigration and partly to improved conditions of trade. The proportion rejected on medical examination was 237 per 1000, a reduction on the figure for the previous year (257) and on the decennial average (321). This improvement, however, is not attributed to any general improvement in physique in the classes from which the recruits are drawn, but to alterations in detail effected in the primary examination by the recruiters, and in the coördination and standardising of the medical examination, and to improved methods of physical training, also to a relaxation of the requirements in certain particulars, such as chest measurement and the condition of the teeth. The rejections for chest measurement were only 29 per 1000, compared with the decennial average of 49; for dental deficiency the rejections were 22, compared with 56 (due to lessened stringency of requirements). Heart disease (37 per 1000) was a more frequent cause of rejection than in the previous decennium (27 per 1000). It is considered that the rejection ratio is too high, many cases being for comparatively harmless functional diseases, such as tachycardia from cigarette smoking. Defective vision (21) was not so frequent a cause of rejection as in the preceding decennium (29 per 1000). In regard to the maintenance of a good standard of recruit (excluding those under 18) the average age was 19·6 years, average height 66·2 inches, minimum and maximum chest measurements (average) 33·3 and 35·6 inches respectively, range of expansion 2·6 inches, and weight 127·8 lb. All these figures are almost precisely equal to those of the preceding decennium, and may be considered satisfactory. The standard of vision was relaxed in 1912. With normal vision in the better eye, not more than 6/60 is required in the other, the recruit being accepted for certain corps only if the right eye be the one defective. The present system of physical training continues to give satisfactory results. A series of observations at Aldershot showed that with each week's training there was a progressive tendency to more rapid return to normal of the pulse-rate after "a full obstacle course."

Sanitation.

A short section of the report deals with the progress of sanitary administration in general throughout the army. Systematic instruction in the principles and practice of this important subject is now given to the cadets at Sandhurst and Woolwich, and practical demonstrations in the field, as well as lectures, are given at the School of Army Sanitation at Aldershot, where 900 officers and men of various branches passed through the courses during the year. It is noted with satisfaction that improvement has taken place in the sanitary administration of barracks and camps throughout the country, and that commanding officers are more and more alive to their responsibility in this regard, and cordially coöperate with medical officers in carrying out recommendations. The health of the troops has been good both in barracks and camp, and this fitness is maintained by a monthly inspection of every soldier, any man in a doubtful state of health receiving special attention. As regards experimental work at the Royal Army Medical College and School of Army Sanitation, the chief results have been that it has been found possible to clarify water thoroughly before passing it through the candles of the regulation filters; as the result of practical tests on experimental marches a new emergency ration has been devised, and bacon and cheese have been added to the ordinary field service ration; the purification of the water of swimming baths has been investigated; and observations have been made and experiments carried out on the heating of wards and barrack rooms, on the efficacy of gaseous disinfectants, and on the preservation of army biscuits from attacks by the larvæ of moths.

Invaliding.

The ratio for invaliding (final discharge from the service) was 8·25 per 1000, being 0·16 per 1000 higher than in the previous year, the increase occurring in men serving abroad. Diseases of the nervous system (1·61) form the highest proportion, being, however, less frequent than in almost any previous year. Circulatory diseases (1·27) are fractionally higher than in 1911, but less than in any year preceding. Tuberculous affections (1·18) were practically the same as in 1911, and syphilis (0·11) led to the invaliding of only 25 men, the ratio being much lower than any previously recorded.

Health of the Troops in the United Kingdom.

The improvement that has been manifested in the health of the home forces during recent years is shown concisely in the following table (the figures are ratios per 1000):—

	Admissions.	Constantly sick.	Deaths.	Invalids.
1889–98 ...	712·5 ...	41·14 ...	4·32 ...	16·98
1907–11 ...	387·0 ...	22·15 ...	2·69 ...	11·59
1911 ...	346·3 ...	20·08 ...	2·47 ...	9·78
1912 ...	346·4 ...	19·50 ...	2·34 ...	9·37

There is but little variation from the figures for 1911, but there is a decrease in all items compared with the preceding quinquennium. The figures for admission to hospital and constant inefficiency from sickness are less than half, and those for mortality and invaliding not much more than half, the ratios for the period before the South African war.

The admissions were highest in the London District, 629·2, and lowest in the Western Command, 241·8 per 1000. The constant inefficiency from sickness was also highest in London, 35·67; the lowest ratio being 11·85, also in the Western Command. As regards the different arms of the service, the Household Cavalry, as always, show the highest admission rate (707·3); and the Foot Guards the highest number constantly sick (34·54); the Infantry of the Line have had only 359·4 and 20·77 respectively. The most fatal diseases amongst soldiers at home were pneumonia (causing 32 deaths), pulmonary tuberculosis (18 deaths), and appendicitis (12 deaths). The diseases causing most sickness were the venereal group, which together gave a constantly sick ratio of 5·51, out of the total 19·50 per 1000; the chief causes of invaliding out of the service were tuberculosis (1·38 per 1000, of which 1·19 was pulmonary), nervous diseases (1·11), and valvular heart disease (1·12).

India.

The average strength of the European force in India

[1] Report on the Health of the Army for 1912. H.M. Stationery Office, 1913. Price 1s. 6d.

during 1912 was 71,001 warrant and non-commissioned officers and men. The following table shows the great improvement in health that has taken place in recent years (in ratios per 1000):—

	Admissions.	Constantly sick.	Deaths.	Invalids.
1889–98 ...	1464·7	89·61	16·43	14·78
1907–11 ...	679·7	38·49	6·77	7·17
1911 ...	524·7	28·81	4·89	6·20
1912 ...	547·9	28·86	4·82	5·94

As compared with 1911 there is a slight increase in the admission ratio, the other figures being practically the same as for that year. Compared with the preceding quinquennium, and still more if the statistics before the South African war be examined, it is seen that the constantly sick and mortality ratios are less than one-third, the admission ratio not much more than one-third, and the invaliding considerably less than one-half the average of the former period.

The greatest number of admissions to hospital have been due to malaria (82·4 per 1000), almost exactly half the ratio for the preceding quinquennium (163·8). Sandfly fever was, however, extremely prevalent, the admissions amounting to 30·5 per 1000, compared with the quinquennial average of 5·4; but pyrexia of uncertain origin caused only 21·2, compared with 47 per 1000 in the former period. No doubt in previous years the diagnosis between these affections was frequently uncertain; for all three together the ratios came to 134·1 in 1912 and to 216·2 in 1907–11. Venereal diseases caused 55·5 per 1000 admissions, compared with 67·8 in the preceding period, and to these affections was also due the greatest inefficiency, their constantly sick ratio being 7·06. The most fatal diseases were enteric fever (0·37), inflammation of the liver (0·34), and pneumonia (0·28 death per 1000).

For enteric fever the number of admissions, 118, was the lowest on record, being only 1·7 per 1000 of strength; if the admissions for paratyphoid A and B be added the ratio is still only 2·6. The enteric admission ratio for 1907–11 was 8·5, and for 1895–1904 it was 22·3; these figures bear the most eloquent testimony to the immense improvement in sanitary conditions that has taken place in recent years and need no comment. The death ratio in 1912 was 0·37 per 1000 (or, including paratyphoid A and B, 0·39); for 1907–11 the ratio was 1·59; for 1895 to 1904 it was 5·62. The largest number of cases in any one division occurred at Secunderabad, where there were 26 (with 5 deaths); in the Poona division there were 19 cases (no deaths); in the Lucknow division 15 cases with 6 deaths. Anti-enteric inoculation is carried on vigorously: 90 per cent. of the European troops have been inoculated. The enteric admissions among these men were in a ratio of 1·20, and the deaths in a ratio of 0·15 per 1000; for the non-inoculated these ratios were 6·69 and 2·69 respectively; the relative case-mortality ratios were 12·8 and 40. For paratyphoid fever inoculation does not seem to have afforded much protection; 64 cases were admitted during the year, only one of which had not been inoculated. The enteric fever depôts at Naini Tal (for Northern India) and Wellington (for the South) have been of the greatest service. Uncertain and possibly dangerous cases are sent to these depôts, where careful and prolonged examinations of excreta are carried out, as well as examinations of cultures forwarded from all parts of India. Important work has also been done in regard to the viability of paratyphoid A bacillus in dejecta buried in earth; in the cold weather such fæces remained infectious for long periods, but in the warmer months they became innocuous within ten days, owing to the multiplication of saprophytic bacteria; the bacillus did not survive in infected flies more than 24 hours.

The year 1912 was not a bad year for fever in India, and for the British troops the malarial admissions were only 82·4 per 1000; for sand-fly fever the admission ratio was 30·5; the admissions for this affection are increasing, due to increased accuracy of diagnosis, which also presumably accounts partly for the reduction in malaria. The report states that "until the use of mosquito nets by troops is general there is unlikely to be any great reduction in malaria prevalence. The Government of India have definitely decided to incur no expense in providing nets for soldiers other than in a few selected places; the provision, therefore, of these protectors for the men depends entirely upon regimental initiative." It is extremely regrettable that such an obscurantist and short-sighted attitude should be adopted by the Indian Government. In former years very large sums have been expended on improvement of water-supplies and sanitary amelioration generally; the result in the improved health of the troops (and their consequent efficiency) is manifest. At the present time one of the most certain means of prevention for malarial fever is quite well known and of easy application—viz., mosquito netting. In stations that are notably malarial we hold it to be the duty of the Government to provide protection for its servants, and to insist that this protection be made use of. Discipline can effect the latter, money is required for the former; it should not be left to the private soldier in a feverish station to pay for his own protection from malarial mosquitoes.

Of small-pox there were 17 cases, with 3 deaths, a much higher incidence than in any recent year; 2 of the fatal cases had been vaccinated, the third had unsatisfactory marks; each of the non-fatal cases had been vaccinated in infancy, and in each revaccination on entering the army had failed. There were an unusually large number of admissions for dengue (364 = 5·1 per 1000), mostly in Calcutta and Madras, where the disease is prevalent among the native population. There appears to be some reason to suspect infection by sand-fly bites. No cases of beri-beri are returned, but 60 cases of multiple neuritis occurred, mostly in Calcutta and other Bengal stations. Two deaths resulted from cardiac failure. For venereal affections the admission ratio, 55·5 per 1000, shows a slight increase on the ratio for 1911 (53·1), although the reduction on the quinquennial figure (67·8) is decided. For syphilis the admissions have diminished, but for gonorrhœa and soft chancre there has been a slight increase over the previous year. These diseases are most prevalent in Burma (84), Secunderabad (74·7), and Lucknow (72·7); least in Rawal Pindi (34·2) and Quetta (39·1 admissions per 1000). The modern treatment by salvarsan is carried out in conjunction with after-treatment by mercury and iodides. There have been no untoward results.

Other Stations Abroad.

In Egypt there was maintained a force averaging 5508 men; the admission (507·4), constantly sick (34·22), and invaliding (10·71) ratios were higher than in 1911, but (except for the last named) lower than in the preceding quinquennium. For enteric fever there were 52 admissions (9·4 per 1000), more than in any year since 1902; 33 cases occurred at Abbassia in April and May, traced to an active carrier, who had had the disease in 1911, had been given a clean bill of health in June (the dejecta having been free from infective organisms since April), but who was found in 1912 to be again excreting B. typhosus abundantly. He was not a cook, but occasionally helped in the preparation of teas for his troop. Malaria occurred at Khartoum, after heavy rainfall; and at Alexandria, among men infected in Cyprus. Tonsillitis broke out in an acute form in Cairo and in Khartoum, ascribed to infected dust at the latter station, and in Cairo to food infected by dust. Bilharzia infection caused 39 admissions in Cairo, attributed to a floating bath in the Nile; this has now been done away with.

In Gibraltar and Malta the health statistics were satisfactory; 3 cases of Mediterranean fever occurred in Malta, 2 being definitely traced to goats' milk.

In the South African Command the average strength of troops was 10,488, with an admission ratio of 343·1, average constantly sick 23·60, and deaths 3·53 per 1000. The constantly sick ratio is somewhat above the quinquennial average (21·78); the other ratios are lower. The general health of the troops is described as having been excellent. For enteric fever there were 25 admissions and 4 deaths; 11 of the cases occurred at Pretoria and 9 at Tempe. Food contamination by flies and the consumption of fruit and vegetables handled by natives are thought to have been likely causes. No cases occurred at Tempe after the wet system of conservancy, with cresol, had been introduced. It certainly causes surprise to learn that this method had not been brought into universal use in such a climate as South Africa some years ago. In North China there were a considerable number of admissions for malaria at Tientsin and Peking, all of benign tertian infection; the parasite was demonstrated microscopically in every case. The disease must have had a local origin (as the men had in most cases not

previously served in any feverish station), and it is noted that this is the first year in which British troops have suffered from malarial infection in North China; a similar outbreak occurred among the French troops at Tientsin, but in their case many had previously served in malarial stations. On the other hand, in South China the admissions for malaria (150) were lower than in any previous year, though among the civil population the disease was prevalent; antimalarial measures have been actively carried out.

The present report, for 1912, the fifty-fourth of the series, differs considerably from its predecessors in recent years. The abstracts, showing diseases according to groups, have been omitted, and tables provided showing the incidence of each disease separately. There is, therefore, considerably more tabular matter and the report is proportionately more complete and valuable. For typographical accuracy and clearness of arrangement the volume deserves the highest praise.

THE MORPHINE AND COCAINE ACT IN SIAM.

(FROM A CORRESPONDENT.)

IN Siam, as in most countries in the East, the increasing tendency to the abuse of morphine and cocaine has become a cause of disquietude to the Government. Several years ago a law was drafted for the purpose of controlling the importation and sale of these drugs, but there were delays in its acceptance by the foreign Powers enjoying ex-territorial jurisdiction. No international agreement seemed possible, so it is not surprising that the King of Siam should have readily accepted the invitation to send delegates to the recent International Opium Conference at The Hague. Although the actual results of this conference were disappointing to those who desired a more binding agreement to secure legislation for the control of the morphine and cocaine trade, the Siamese Government determined to act in the spirit of the Convention, and once more brought forward a Morphine and Cocaine Act. This time the difficulties were surmounted, as the discussions at The Hague had brought about amongst the Powers represented a feeling of unanimity with regard to the dangers involved, as well as a desire for international coöperation in attempting to stop the abuses which were so well known to all the delegates.

The result is that Siam is to be congratulated on the fact that she has led the van in legislation against morphine and cocaine. The new Act was signed by His Majesty King Vajiravudh in June, 1913, and came into force on Jan. 1st, 1914. It will not in any way interfere with the legitimate use of these drugs in medicine and surgery, but will give the Government the power to control the importation and sale of morphine and cocaine in Siam by all persons, whether Siamese or foreign subjects. The Act applies only to morphine and cocaine in a pure state, the trade in opium being already regulated by the treaties. No person may now deal in morphine or cocaine or have in his possession more than 1 gramme of these drugs unless he has been granted a dealer's licence. Importation is restricted to the ports of Bangkok and Puket or to such other ports as may be hereafter declared. At these ports, when the proper Customs entry for any imported morphine or cocaine has been accepted by the Customs officer, and such officer is satisfied that the law has been complied with fully, a permit is issued to the importer for the removal of the goods from the custody of the Customs to the premises specified on the permit.

Except on special permission granted by the Minister concerned, a licensed dealer shall not be allowed to import or purchase in any one year more than a total of 160 grammes of morphine and 130 grammes of cocaine or the equivalent thereof in solutions, pills, or other preparations. By this restriction to what may be considered legitimate amounts required by an ordinary pharmacy an attempt is made to prevent the preparation and sale of so-called "anti-opium remedies." If the licensed dealer's accounts as made out in accordance with Schedules A and B of the Act show that he has expended these amounts legitimately, he will be granted a special permit to import or purchase an additional amount as required.

In addition to these amounts of morphine and cocaine, persons, whether licensed or not, are permitted to import and sell any of the preparations enumerated upon Schedule C. The selection of these articles has been entrusted to the medical officer of health, whose guiding principle has been to pass only such remedies as are either harmless to the consumer owing to the small proportions of morphine or cocaine contained therein, or which are so combined with other drugs as to render them impossible of being used in a habitual fashion.

Monthly accounts must be submitted by all licensed dealers showing the imports or purchases and the daily sales or deliveries of morphine and cocaine. Dealers' licences, removal permits, and accounts of receipts and issues of morphine and cocaine shall always be open to inspection by the officials specified in the Act. These officials shall also have the right to inspect any books or documents or to search the premises of any licensed dealer or any other premises where they suspect that morphine or cocaine is kept contrary to the provision of the Act. They may also seize and attach any morphine and cocaine the legal possession of which the owner is unable to demonstrate.

Clause 16 deals with the composition of a commission of analysis in the case of disputes as to the quantity of morphine or cocaine contained in any preparation. The usual penal clauses are included, and deal with illegal importation or possession of morphine or cocaine, the making of false entries, the failure to send in monthly returns, &c.

It remains to be seen how the Act will work in practice, but at any rate His Majesty has taken a step in the right direction, and it is earnestly hoped that the people of Siam will be saved from what has become such a curse in other countries of the Far East.

ROYAL COMMISSION ON VENEREAL DISEASES.

AT the twelfth meeting of the Royal Commission on Venereal Diseases held on Jan. 23rd evidence was given by Dr. J. Kerr Love, aural surgeon to the Royal Infirmary of Glasgow, aurist to the Glasgow School Board, and to the National Bureau for the Deaf.

Dr. Love's evidence dealt largely with the importance of syphilis as a cause of deafness in children. This syphilitic deafness, he said, was essentially a disease due to untreated syphilis amongst the poor. He was of opinion that about 25 per cent. of the cases of congenital deafness were due to syphilis, and that this form of deafness was hardly ever cured; better general health could be obtained for the children by treatment, but the restoration of hearing was rarely possible. The cost of education in the case of a deaf child was at least five times as great as in the case of a normal child, so that even from the financial point of view alone the matter was a very serious one.

Dr. Love illustrated the effect of syphilis on child life by showing a number of family trees of families affected with syphilis; a record of 21 families showed that two-thirds of the children born were born dead, or if alive were blind or deaf, or both. He considered that improved treatment of syphilis was urgently demanded, and that this treatment should be placed within the reach of all. He thought that some form of notification of the disease was desirable, but that universal and compulsory notification was not at present feasible. It might, however, be prudent to attack syphilis by a flank movement and to notify certain conditions which are often due to congenital syphilis, following up the information obtained by treatment of syphilis if the Wassermann reaction or any other test that might be applied indicated its presence.

At the thirteenth meeting Major W. S. Harrison, R.A.M.C., pathologist to the Royal Military Hospital, Rochester Row, gave evidence. He said that the chief cause of the late manifestations of syphilis was inadequate treatment, and that since the treatment of syphilis in the army had been systematised malignant syphilis had become almost unknown. Adequate treatment should be commenced at the earliest possible stage after the establishment of the diagnosis and should include prolonged observation clinically and by all laboratory tests until the doctor is satisfied.

Major Harrison described the methods of diagnosis in use in the army, and stated that the diagnosis of syphilis which in former years was often difficult had now become as exact as that of almost any other disease. He referred also to the importance of gonorrhœa and gave an account of the methods adopted at the Rochester-row hospital in connexion with this disease.

Major Harrison was of opinion that it was very important that both medical practitioners and the general public should be educated with regard to venereal diseases, and he laid stress on the desirability of obtaining legislation to prevent unqualified persons from treating these diseases. With regard to the question of notification he advocated a system of confidential notification at the option of the local authority. In view of the importance of providing facilities for diagnosis in order to secure early treatment he thought that district and county laboratories should be established under the direction of a central national laboratory, and he submitted a scheme for such a national laboratory service.

DINNER TO DR. CHRISTOPHER ADDISON, M.P.

A COMPLIMENTARY dinner was given to Dr. C. Addison, M.P., on Feb. 6th, at the Hôtel Métropole, by a number of his medical and political friends and supporters. The CHANCELLOR of the EXCHEQUER presided. The dinner was organised by the following committee:—The Right Hon. Lord Sandhurst, Sir Clifford Allbutt, Sir Arbuthnot Lane, Sir Almroth Wright, Sir Victor Horsley, Sir Shirley Murphy, Sir Robert Philip, Lieutenant-Colonel Sir William Leishman, R.A.M.C., the Right Hon. R. Farquharson, Professor G. Sims Woodhead, Professor Arthur Keith, Professor Arthur Thomson, Professor William Wright, Professor Arthur Hall, Professor A. M. Patterson, Professor William Bulloch, Mr. G. Lenthal Cheatle, Mr. C. B. Lockwood, Mr. C. J. Bond (Leicester), Dr. Lauriston Shaw, Dr. F. W. Mott, Dr. Arthur Latham, Dr. T. W. Shore, Dr. Hugh Thursfield, Dr. Ewen Maclean (Cardiff), Dr. Alexander Macphail, Dr. Grant Andrew (Glasgow), Dr. W. Langdon Brown, Dr. H. Morley Fletcher, Dr. Adam Fulton (Nottingham), Mr. D. F. Todd (Sunderland), Dr. R. C. Buist (Dundee), Mr. C. E. S. Flemming (Bradford-on-Avon), Dr. Norman Walker (Edinburgh), Dr. Leonard Hill, Dr. A. C. Farquharson (Durham), Mr. J. Y. W. Macalister, Mr. Walter Jessop, and Dr. B. A. Richmond. Covers were laid for 280 guests.

After the loyal toasts had been duly honoured, the CHANCELLOR of the EXCHEQUER proposed the toast of the evening, remarking that it was not merely the size of the gathering but its representative and varied character, and the fact that it contained men of distinction whose fame in the medical world extended far beyond the confines of this kingdom, that testified to the esteem in which Dr. Addison was held. The House of Commons fairly represented every profession, every branch of industry, trade, and commerce throughout the whole of the kingdom, and when a man got on in that assembly there was some reason for it. Dr. Addison had become one of its outstanding personalities. It was difficult to define what got a man on in the House of Commons, but it might be perhaps summed up in the one word, quality. He (the speaker) had depended upon Dr. Addison almost as much as on any man in the House of Commons, and had never been let down by him. The work which Dr. Addison had inaugurated in connexion with the treatment of school children was one of the biggest propositions a country had ever ventured to undertake. He had also been mainly responsible for committing the Government to the very important question of medical research work which would bear rich fruit in the future, and with regard to the Insurance Act his advice had been invaluable on sanatorium benefit and on other questions of a similar kind. He hoped the controversy with the medical profession was now passed, but during the great struggle he had received valuable help from Dr. Addison, who not only gave good advice to the Government but was absolutely loyal to his profession. In reviewing the working of the Insurance Act Mr. Lloyd George said he believed there were 22,500 general practitioners in Great Britain, and the number on the panel, excluding duplicates within any Insurance Committee but including medical men who are put on more than one panel, was over 20,000. The vast majority came in on Jan. 15th, 1913, but since then 2500 had come in. Among this number nearly £4,500,000 had been distributed, the average for each medical man being £230. He then drew a glowing picture of the financial gain to the profession of medicine and of the advantages which must result to the community. A great health assessment of the nation was being taken, he said, especially the inspection of school children, and the value to the State of having a man like Dr. Addison to advise the Government in its legislation was very high.

Mr. C. B. LOCKWOOD, who supported the toast, briefly outlined the medical career of Dr. Addison, remarking that the fact that he took honours in forensic medicine at the London University pointed to the bent of his mind. Mr. Lockwood in the course of his speech pleaded for medical bursaries such as were common in the Scotch Universities, in order that the numbers of the medical profession might be increased if a greater demand for medical men arose owing to the working of the Insurance Act; while fuller use might be made, he added, of the infirmaries as teaching centres.

Dr. ADDISON, in an eloquent reply, which held the close attention of his audience, referred to the great honour done to him and his friends by the Chancellor of the Exchequer's presence that evening. He believed that in time the medical profession would recognise that the great changes which the Chancellor of the Exchequer had initiated would form a starting-point for improvements in the public health, as well as in the art and character of the practice of medicine, which were both necessary and fundamental. Public health was now a national concern. It appealed to the citizen not through any circuitous path of the Poor-law or otherwise, but directly through the British taxpayer's pocket. It demanded the application of well-considered and progressive measures not only to bring about an earlier and more efficient treatment of sickness, but increasingly to prevent its occurrence. Coördination among the various authorities who administered the laws dealing with the health of the nation was necessary, but something more was wanted than mere medical treatment—namely, better food and instruction in the principles of health. Clean homes and temperate living were also required. He referred to the confusion which existed in the organisation of public health administration. In some respects that would be automatically improved. For example, the cost on the Poor-law in connexion with tuberculosis was heavy, but the large grants to county council and other authorities would in time result in the complete removal of tuberculosis treatment from the Poor-law authorities. Then again, under the National Insurance Act it would not be necessary for aged persons to apply for medical treatment to the guardians. In concluding his speech he said it was necessary for those who were called upon to make reports upon conditions under which the people worked that they should be at liberty to tell the truth, and the whole truth, without fear or favour, and they should be guaranteed a proper security in the tenure of their office. The medical profession owed a debt of gratitude to Mr. Lloyd George for the establishment of the scheme of medical research.

Dr. LAURISTON SHAW, in proposing the health of the Chairman, said that the medical profession was recovering from its numerous traumatic lesions, and now there were few who were not anxious to express their gratitude for the generous and sportsman-like manner in which the Chancellor of the Exchequer had conducted the contest with them over the Insurance Act.

In his reply Mr. LLOYD GEORGE asked the profession to guide and enlighten public opinion as to what could be done by coöperation between the profession and the public.

A PERFORMANCE OF "LES AVARIES."—Under the auspices of the Society for Race Betterment a performance of *Damaged Goods*—a translation by John Pollock of *Les Avariés* by Brieux—will be given by the Authors' Producing Society at the Little Theatre, John-street, Adelphi, W.C., on Monday next, Feb. 16th, the anniversary of Sir Francis Galton's birth. The play will be given to members of the latter society and invited guests at 2.30 o'clock in the afternoon.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County of Berkshire.—The most important recent feature of public health administration by county councils has in most cases been their sanatorium and dispensary provision and the general county arrangements for prevention of tuberculosis, and these questions naturally bulk largely in the series of annual reports of English county medical officers of health which have appeared during the last few months. It is, however, regrettable that, in consequence of the official scheme of reporting, the accounts now available do not, as a rule, include the developments which took place last year, but relate only to the action taken in 1912, which (so fast have administrative schemes developed) is often very little guide to the present position. County medical officers are, of course, handicapped in reporting earlier on matters which are under their direct charge by the official requirement that they are to include in their annual reports a digest of all annual and special reports of the medical officers of health of the various sanitary districts in their counties, and are to review a number of questions which have fallen under the district rather than the county jurisdiction during the year reported on. It has been suggested that reviews of this kind might be carried over to the following year's report without loss of usefulness. There can be no doubt, however, that they can be made very valuable, and Dr. Gerard C. Taylor's report on the public health of Berkshire is a good example of their utility. We would specially commend the introductory tables, which give names, addresses, telephone numbers, and the like of the medical officer of health of each sanitary district, corresponding particulars of the sanitary inspectors, census figures for each district and parish, their death-rates, crude, corrected, and various other details which, though they may seem small individually, add greatly to the practical value of the volume to all concerned with public health work in the county. We think, too, that there is much to be said in favour of the plan which Dr. Taylor follows when he prefaces his account of the position of the various districts in such matters as hospitals, water-supply, and housing, by concise statements of the powers and duties of the local authorities in regard to them. In the section relating to infectious disease Dr. Taylor mentions the discovery, in consequence of the appearance of diphtheria at Cookham Rise school, of two children who were carriers of the diphtheria bacillus, although showing no symptoms of diphtheria. One of these carriers received persistent treatment for some three months, at the end of which she developed definite clinical symptoms of diphtheria. The case is, of course, not very singular, but it is so frequently assumed that the diphtheria carrier is immune to attack that it deserves notice.

County of Staffordshire.—Much of the time occupied during 1912 in elaborating a county scheme for dealing with tuberculosis in Staffordshire was devoted to the discussion of a promising proposal for amalgamation of this work under a single administrative authority, which would act for the whole of the county and for numerous county boroughs as well. The amalgamation has only been partially effected; it includes the county and the two county boroughs of Wolverhampton and Dudley, but other outside authorities have preferred each to make its own arrangements. It is easy to understand that local preference would generally be in the direction of independence. It remains to be proved by experience that the smaller county boroughs can in this way do as well for their tuberculous cases, and it will be instructive in future to compare their position with that of Dudley and Wolverhampton. In dealing with enteric fever in Staffordshire Dr. George Reid lays stress on the steady and uninterrupted decline which is taking place in the mortality from this disease both in urban and rural areas. In the former enteric fever death-rates per 1000, which in the five-yearly periods 1889–93, 1894–98, 1899–1903, and 1904–08 were respectively 0·15, 0·2, 0·16, and 0·09, have diminished to 0·04 in 1912, while in the latter the corresponding figures are 0·12, 0·08, 0·09, and 0·03, which is also the figure for 1912. The gradual abolition of privies and the substitution of water-closets, as well as the extension of public water-supplies, must be given the greatest prominence among the reasons of this gratifying diminution. Improvements are by degrees being effected in the quality of water in the rivers and streams of Staffordshire by the efforts which are made to secure satisfactory means of sewage disposal. Manufacturers' effluents, of course, often contribute largely to pollution of rivers, and it is desirable that local authorities, which usually obtain substantial sums in the way of rates from the factories in their districts, should wherever possible take these trade wastes into the public sewers so that they may be purified, with other sewage, at the outfall works. Milk factories may be great offenders in the matter of trade wastes, and at Uttoxeter considerable difficulty seems to have arisen through the district council taking the shortsighted policy of refusing to admit the effluent into the sewers, notwithstanding the reiterated advice of the county council, the Local Government Board, and the Royal Commission on Sewage Disposal. Needless pollution of the river consequently goes on, the public health committee of the county feeling that it would be inequitable to prosecute the manufacturers, while the county authorities are apparently unable to coerce the district council. In this county systematic inspection of the sanitary condition of urban districts by the county medical officer of health or his assistants has been in progress for some time, and seven of these were inspected in 1912. Dr. Reid anticipates that good will result from the representations which have been made to the district councils as a result of these inspections. The notification of ophthalmia neonatorum, if we remember right, came into practice in Staffordshire largely on Dr. Reid's initiative. At present this affection is notifiable in rather more than half the area of the county, including about three-fourths of its population, but some districts seem to have been content to adopt the notification—a useless proceeding by itself—without making suitable arrangements for the immediate treatment of the new-born infants found to be affected. The county scheme for providing gratuitous bacteriological examinations in suspected cases of diphtheria, enteric fever, and tuberculosis is said to be successful, when judged by the increasing numbers of specimens submitted. The cost to the county per specimen is 5*s.* in the case of diphtheria (2*s.* 6*d.* in the case of diphtheria contacts), 3*s.* for tuberculosis, and 5*s.* for enteric fever. In reporting on the administration of the Midwives Act Dr. Reid draws attention to the fact that midwives now send for medical help to a much larger extent than formerly. In the absence of a statement of the number of births attended by midwives during the year no percentage can be given, but in 1912 the total number of requisitions for medical help was 893, the total births, whether attended by midwives or not, being 18,332.

County of Nottinghamshire.—In this county 21 cases of puerperal fever, with 8 deaths, were reported in 1912, and Dr. H. Handford, commenting on the smallness of the former figure, refers to the unwillingness of many members of the medical profession to notify cases of puerperal fever. Attention has often been drawn to the unreliability of puerperal fever notification, but it is not, we think, generally supposed that the occurrence of puerperal fever in the practice of midwives goes unreported by medical men where they meet with it. Dr. Handford, however, states that this reluctance to notify constitutes one of the greatest hindrances which local supervising authorities have to overcome in carrying out the Midwives Act and in supervising the practice of midwives. While drawing attention to the pressing need for new milk legislation, and the harm done by its continued postponement, Dr. Handford is able to show that even under existing conditions a considerable advance has been made by some of the more progressive sanitary authorities in Nottinghamshire towards reducing the risk of tuberculous milk. In the urban district of Newark, for example, there are dairy and veterinary inspectors who systematically visit cowsheds and take measures to eliminate diseased cattle; the work of locally appointed veterinary surgeons is referred to in the case of several other districts, including Worksop, where 812 animals were examined for tuberculosis; Sutton-in-Ashfield, where every cow in milk was subjected to veterinary inspection during the year; and Kirkby-in-Ashfield, where the appointment of a veterinary inspector was justified by the discovery of 15 cows with tuberculosis of the udder out of 242 cows inspected. The opportunities for useful

work of this kind should be increased by the Tuberculosis of Animals Order of last year, and it is to be hoped that it will be continued. The report brings out forcibly the importance of not confining public scavenging and similar work to urban centres. The organised removal of refuse is one of the principal needs of many villages and comparatively small communities. Another matter which should receive attention in rural districts on the outskirts of manufacturing centres is the prevention of smoke nuisance. The proper consumption of smoke results not only in greater amenities and better health to the public, but also usually in financial benefit to the manufacturer, and local authorities should not hesitate to press their powers in the matter, even when the offending factory is more or less "out in the country."

REPORTS OF SCHOOL MEDICAL OFFICERS.

Hampshire County Council.—Dr. R. A. Lyster's report includes the record of a special investigation made to determine the frequency of pulmonary tuberculosis. 230 children taken at haphazard were very carefully and systematically examined on a pre-arranged plan by the inspectors and their results give a percentage of pulmonary tuberculosis of 3·5. This means that in the Hampshire schools there are 1800 cases of this disease. A full discussion of the part of the school doctor in the campaign against tuberculosis follows. The investigation points to the malnutrition of many children and the inspectors say, "Ignorance and intemperance, bad management and short-sighted extravagance are, it is true, on every hand, but it must be admitted that most of the poverty and malnutrition is due to involuntary and not voluntary causation. We are unanimously and strongly of opinion that any measure which tends to improve the nutrition of our school children must be a potent—probably the most potent—weapon in the fight against tuberculosis."

Nottinghamshire County Council.—Steady progress is recorded by Dr. H. Handford. The percentage of parents attending examinations has risen steadily in the years 1909 to 1912; the figures are 49·6, 50·0, 51·2, and 54·5. The percentage of cases treated for defects notified at inspection has risen also, the corresponding figures being 34·6, 45·9, 41·3, and 63·1. Only the worst dental cases are notified and a vision clinic swells the percentage for 1911.

Gloucestershire County Council.—An important change in administration is recorded by Dr. J. M. Martin, the work of medical inspection having been placed largely in the hands of the medical officers of health of four large combined sanitary districts covering nearly two-thirds of the county. The proportion of untreated defects has fallen from 35·4 to 19·9 in three years. But the percentage found to be tuberculous has gone up from 0·46 to 1·34. This was due to an increase in cases of pulmonary disease discovered by Dr. Madeleine Baker, who had made a special study of the disease and left to become a tuberculosis officer in Wales. Dr. Baker found 64 cases among 2619 children examined by her, whereas two other medical inspectors found only 15 cases amongst 4884 children.

West Riding of Yorkshire.—Dr. J. R. Kaye's report is a well-arranged document; the index is useful, and the list of the medical staff with the number of departments and children under their control gives information which is frequently left out and which might be copied (and amplified) by other authorities. Care committees exist in 83 districts, and valuable work has been done.

Bilston Urban District Council.—Dr. T. Ridley Bailey notes that among 413 children examined before leaving school 30 per cent. had some defect, as against 48·4 per cent. the previous year. The decline is partly attributed to the examination (and presumably treatment) of "special cases" at an earlier period of school career. The report ends by stating that "slums ..... must be abolished," and further, "that destitution and extreme poverty shall be, as they should be, regarded as a disgrace to humanity and civilisation and no longer allowed to exist, whatever may be the cost—in money and endeavour—required for their final eradication." To this conclusion many school medical inspectors will be driven, and we welcome its explicit statement.

Northamptonshire County Council.—Various experiments are recorded of interest, and among them the provision of "exercise corridors open to the air on one side" in four schools and of open-air class-rooms protected from the weather by a light roof in several places. Provision for school gardens is made in all new schools except those for infants only. A comparison of cleanliness of teeth shows urban cleaner than rural children and girls than boys. A reduction in cases of ear disease (1911, 62 cases; 1912, 40 cases) is concurrent with reduction in tonsillar enlargement. Dr. J. H. Mason gives full and good tables of statistics from which interesting comparisons of urban and rural children may be made.

Staffordshire County Council.—Dr. George Reid presents the report of the senior school medical inspector (Mr. John Priestley), to which are added some valuable special reports on heart disease, ringworm, and temperatures of school children. The four assistant school inspectors are all women, and each to a large extent is autonomous in her area. "In short, each inspector is made to feel that the children of her schools are her own medical 'flock.'" A very curious numerical relationship is noticed in considering the history of children who have had infectious diseases. The figures are the same (with the exception of mumps due to a wrong diagnosis by teachers) for six years, and those for 1910 may serve as an example. The children having had measles are taken as 1000, when the other figures are whooping-cough 452, chicken-pox 252, scarlet fever 173, mumps 83, and diphtheria 44. The geometrical progression is almost uncanny. Another interesting point raised is as to whether some skins "repel lice." It would appear to be the case. The report on heart cases deals with 34,244 children inspected in 1908–09, among whom were 1767 children, or 5·16 per cent., showing some cardiac disturbance. There were 1467 functional, 30 congenital, and 270 organic valvular disease. Dr. Lila S. Greig analyses the cases admirably. The whole report is rich in suggestion and in facts.

City of Cardiff.—Dr. Edward Walford's report gives two coloured charts of the notifications of measles, whooping-cough, diphtheria, and scarlet fever in each week of the year, also a copy of the instructions issued to parents and teachers for dealing with infectious illness. Estimates for the establishment of a school clinic are given.

Cumberland County Council.—Dr. F. H. Morison's report devotes a considerable amount of space to consideration of building and equipment of schools. Some diagrams are given. Of 12,419 children examined, 1·5 per cent. were classed as phthisical, 4·4 per cent. as pretubercular, 2·2 per cent. as weak-chested, and 0·3 per cent. as delicate. The print of this report is too small.

Rutland County Council.—Rupture was found to be actually present or foreshadowed by the existence of large external abdominal rings in 7·2 per cent. of the boys of the entrant and leaver group. Two of these were umbilical hernia, the remainder inguinal. A small dental treatment scheme under the education committee is in operation at Oakham, being privately paid for.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns, with populations exceeding 50,000 persons at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 8961 births and 5750 deaths were registered during the week ended Saturday, Feb. 7th. The annual rate of mortality in these towns, which had been 17·0, 17·5, and 18·4 per 1000 in the three preceding weeks, declined to 16·5 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 17·7, against a corresponding rate of 18·1 per 1000 in London. Among the several towns the annual death-rate last week ranged from 4·7 in Eastbourne, 6·3 in Ilford, 8·1 in Walthamstow, 8·5 in East Ham, and 8·8 in Edmonton, to 23·4 in Plymouth and in Wolverhampton, 24·7 in Swindon and in Carlisle, 24·9 in Gateshead, and 27·5 in Burnley.

The 5750 deaths from all causes were 658 fewer than the number in the previous week, and included 375 which were referred to the principal epidemic diseases, against numbers rising from 329 to 400 in the three preceding weeks. Of these 375 deaths, 116 resulted from whooping-cough, 70 from diphtheria, 66 from infantile diarrhœal diseases, 64 from measles, 38 from scarlet fever, and 21 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·1, against 1·0 and 1·2 per 1000 in the two preceding weeks. The deaths attributed to whooping-cough, which had increased from 64 to 93 in the four preceding weeks, further rose to 116 last week, and caused the highest annual death-rates of 1·3 in Sheffield and in Swansea,

1·9 in Burnley and in Barnsley, 2·0 in Dudley, 2·4 in Rotherham, 2·6 in Gateshead, and 3·2 in West Hartlepool. The deaths referred to diphtheria, which had been 70, 68 and 85 in the three preceding weeks, declined to 70 last week; of this number 19 occurred in London, 8 in Birmingham, 4 in Manchester, 3 in Northampton, 3 in Sheffield, and 3 in Aberdare. The fatal cases of diarrhœa and enteritis (among infants under 2 years) which had been 80, 68, and 95 in the three preceding weeks, fell to 66 last week, and included 21 in London, 4 in Liverpool, 3 in Birmingham, 3 in Manchester, and 3 in Rhondda. The deaths attributed to measles, which had been 55, 70, and 79 in the three preceding weeks, declined to 64 last week; the highest annual death-rates from this cause were 1·6 in Middlesbrough, 1·7 in Cardiff, 2·0 in Ipswich, and 5·2 in Burnley. The deaths referred to scarlet fever, which had been 37, 41, and 29 in the three preceding weeks, rose to 38 last week, and included 5 in London, 4 in Birmingham, 4 in Liverpool, 3 each in Manchester, Salford, and Sheffield, and 2 in West Ham. The fatal cases of enteric fever, which had been 21, 17, and 21 in the three preceding weeks, were again 21 last week, of which 8 occurred in London, 3 in Manchester, and 3 in Halifax.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had been 3676, 3567, and 3599 at the end of the three preceding weeks, had declined to 3554 on Saturday last; 379 new cases were admitted during the week, against 388, 375, and 460 in the three preceding weeks. These hospitals also contained on Saturday last 1137 cases of diphtheria, 276 of whooping-cough, 71 of enteric fever, and 65 of measles, but not one of small-pox. The 1441 deaths from all causes in London were 116 fewer than the number in the previous week, and were equal to an annual death-rate of 16·6 per 1000. The deaths referred to diseases of the respiratory system, which had been 400, 421, and 425 in the three preceding weeks, fell to 347 in the week under notice, and were 100 below the number recorded in the corresponding week of last year.

Of the 5750 deaths from all causes in the 97 towns, 190 were attributed to various forms of violence, and 439 were the subject of coroners' inquests. The causes of 51, or 0·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, and in 68 other smaller towns. Of the 51 uncertified causes of death last week, 12 were recorded in Birmingham, 7 in Liverpool, 6 in Gateshead, 3 in London, 3 in Bootle, and 2 each in Southend-on-Sea, Blackpool, and South Shields.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns, with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1207 births and 807 deaths were registered during the week ended Saturday, Feb. 7th. The annual rate of mortality in these towns, which had been 20·4, 20·9, and 20·0 per 1000 in the three preceding weeks, declined to 18·4 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 20·0, against 17·7 per 1000 in the 97 large English towns during the same period. Among the several Scotch towns the annual death-rate last week ranged from 7·6 in Motherwell, 12·3 in Perth, and 14·7 in Greenock, to 23·5 in Kilmarnock, 26·7 in Falkirk, and 31·1 in Hamilton.

The 807 deaths from all causes were 71 fewer than the number in the previous week, and included 68 which were referred to the principal epidemic diseases, against 100 and 91 in the two preceding weeks. Of these 68 deaths, 34 resulted from measles, 15 from diphtheria, 7 from infantile diarrhœal diseases, 6 from scarlet fever, 5 from whooping-cough, and 1 from enteric fever, but not one from small-pox. These 68 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·5, against 1·1 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 29, 51, and 48 in the three preceding weeks, further declined to 34 last week; of this number 18 occurred in Glasgow, 4 in Greenock, 3 in Edinburgh, 3 in Hamilton, 2 in Leith, and 2 in Coatbridge. The deaths referred to diphtheria, which had been 13, 19, and 14 in the three preceding weeks, were 15 last week, of which 9 occurred in Aberdeen and 4 in Glasgow. The fatal cases of diarrhœa and enteritis (under 2 years), which had been 8, 9, and 12 in the three preceding weeks, fell to 7 last week, and included 3 in Glasgow. The deaths attributed to scarlet fever, which had been 8, 15, and 10 in the three preceding weeks, further declined to 6 last week, of which 4 were recorded in Glasgow. The 5 deaths referred to whooping-cough, comprising 4 in Glasgow and 1 in Coatbridge, were slightly below the average in the earlier weeks of the quarter. The fatal case of enteric fever was registered in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 230, 230, and 189 in the three preceding weeks, further fell to 179 in the week under notice; 33 deaths were attributed to different forms of violence, against 26 and 36 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 665 births and 507 deaths were registered during the week ended Saturday, Feb. 7th. The annual rate of mortality in these towns, which had been 21·6, 23·8, and 24·0 per 1000 in the three preceding weeks, declined to 21·9 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 23·3 per 1000; in the 97 large English towns the corresponding rate did not exceed 17·7, while in the 16 Scotch towns it was equal to 20·0 per 1000. The annual death-rate last week was equal to 25·3 in Dublin (against 16·6 in London and 18·3 in Glasgow), 21·4 in Belfast, 21·8 in Cork, 16·5 in Londonderry, 24·4 in Limerick, and 11·4 in Waterford, while in the 21 smaller towns the mean death-rate did not exceed 18·5 per 1000.

The 507 deaths from all causes were 48 fewer than the number in the previous week, and included 37 which were referred to the principal epidemic diseases, against 39 and 21 in the two preceding weeks. Of these 37 deaths, 10 resulted from scarlet fever, 8 from measles, 7 from infantile diarrhœal diseases, 6 from whooping-cough, 4 from enteric fever, and 2 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·6 per 1000; in the 97 large English towns the corresponding death-rate did not exceed 1·1, while in the 16 Scotch towns it was 1·5 per 1000. The deaths attributed to scarlet fever, which had been 12, 2, and 5 in the three preceding weeks, further rose to 10 last week, of which 7 occurred in Belfast. The deaths referred to measles, which had been 6, 8, and 3 in the three preceding weeks, rose to 8 last week, and comprised 5 in Dublin and 3 in Armagh. The fatal cases of diarrhœa and enteritis (under 2 years of age), which had been 11, 9, and 6 in the three preceding weeks, were 7 last week, and included 3 in Dublin and 3 in Belfast. Of the 6 deaths attributed to whooping-cough, which were equal to the average in the earlier weeks of the quarter, 2 occurred in Dublin, 2 in Belfast, and 2 in Newtownards. The 4 fatal cases of enteric fever were recorded in Dublin, Belfast, Londonderry, and Sligo respectively, and those of diphtheria in Dublin and Lisburn respectively.

The deaths referred to diseases of the respiratory system, which had been 130, 153, and 157 in the three preceding weeks, fell to 132 in the week under notice. Of the 507 deaths from all causes, 168, or 33 per cent., occurred in public institutions, and 10 resulted from various forms of violence. The causes of 13, or 2·6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent.

THE SERVICES.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned are restored to the establishment:—Supernumerary Lieutenant-Colonel Hugh C. Thurston, C.M.G., vice A. R. Aldridge, retired (dated Jan. 24th, 1914); Supernumerary Lieutenant-Colonel and Brevet Colonel Sir William B. Leishman, vice M. W. Russell, promoted (dated Feb. 1st, 1914); and Supernumerary Captain Malcolm Leckie is restored to the establishment (dated Feb. 11th, 1914).

Captain Archer Irvine-Fortescue is seconded whilst studying the Japanese language (dated Dec. 21st, 1913).

Lieutenant Francis D. Cairns resigns his commission (dated Feb. 7th, 1914).

The undermentioned Lieutenants are confirmed in their rank:—Robert B. Price, William V. Corbett, Frank C. Cowtan, Noel T. Whitehead, and Henry C. D. Rankin.

Surgeon-General H. G. Hathaway, C.B., deputy director of medical services to the Eighth (Lucknow) Division, has taken up duty at Headquarters, Lucknow Cantonment. Brevet-Colonel and Lieutenant-Colonel Sir William B. Leishman has been selected for appointment as member of the Army Medical Advisory Board as Expert in Tropical Medicine, vice Lieutenant-Colonel C. Birt, who has been placed under orders for service abroad.

Lieutenant-Colonel C. J. MacDonald has been selected for the increased rate of pay under Article 358 of the Royal Warrant for Pay and Promotion. Lieutenant-Colonel N. Faichnie has arrived home for duty from Meerut Cantonment. Lieutenant-Colonel A. L. F. Bate has been transferred from the Military Hospital at Preston to the Woolwich District. Lieutenant-Colonel C. W. H. Whitestone has been selected to hold charge of the Military Hospital at Hilsea. Lieutenant-Colonel G. W. Tate has embarked for a tour of

service in Bermuda. Lieutenant-Colonel S. C. Ehlson has been appointed to hold charge of the Military Hospital, Lucknow Cantonment. Lieutenant-Colonel C. W. R. Healey has been selected to hold charge of the Medical Division at the Royal Herbert Military Hospital, vice Lieutenant-Colonel A. B. Aldridge, who has retired.

Major E. W. W. Cochrane has been appointed to officiate as Clinical Pathologist at the Cambridge Military Hospital, Aldershot. Major B. W. Longhurst has embarked for a tour of service in India with the Third (Lahore) Division of the Northern Army. Major J. Hennessy has been appointed to hold charge of the Military Hospital, Ahmednagar Cantonment. Major W. S. Harrison has been selected as Specialist Sanitary Officer at Jamaica, vice Major H. P. W. Barrow. Major J. D. Alexander has been transferred from the Military Hospital at Calcutta to Jubbulpore Cantonment. Major G. A. Moore has taken up duty in the Aldershot Command. Major A. W. A. Irwin has joined at Cork. Major P. S. O'Reilly has been appointed Medical Officer to the Royal Arsenal, Woolwich. Major L. Addams-Williams has embarked for a tour of service with the Fourth (Quetta) Division of the Northern Army. Major H. W. Long has been transferred from the Military Hospital at Devonport to Choulston. Major W. M. Power has been appointed to hold charge of the Military Families Hospital at Chatham. Major L. M. Purser has been transferred from the Military Hospital at Sialkot to Meerut Cantonment. Major H. M. Morton has joined at Glasgow. Major R. V. Cowey has been selected as Specialist in Midwifery and Gynæcology at Bulford, Salisbury Plain. Major E. H. Condon has relinquished charge of the Military Hospital at Cardiff, and embarked for a tour of service in India with the Seventh (Meerut) Division of the Northern Army. Major J. H. Barbour has been selected as Medical Examiner of Recruits on the London Recruiting Area Staff.

Captain F. A. H. Clarke has been transferred from Darjeeling Cantonment to Calcutta for duty at the Military Hospital. Captain C. W. Bowle has arrived home for duty from Jubbulpore Cantonment. Captain A. C. H. Gray has taken up duty at the Royal Army Medical College. Captain T. S. Coates has relinquished medical charge of the Royal Arsenal at Woolwich. Captain H. J. Crossley has taken up duty at Bareilly Cantonment. Captain R. J. Franklin has been transferred from Solon Cantonment to Ferozepore. Captain D. Ahern has joined the Irish Command. Captain H. W. Russell has been selected for appointment as Specialist in the Prevention of Disease to the Sirhind Brigade and placed in charge of the Bacteriological Research Laboratory at Ambala Cantonment. Captain R. T. Collins has been transferred from charge of the Military Reception Hospital at Glencorse to Glasgow. Captain A. C. Elliott has arrived home for duty from India. Captain A. G. Wells has been appointed for duty on board the transport s.s. *Rewa*, leaving Bombay for Southampton on Feb. 13th. Captain R. J. Cahill has been appointed to hold charge of the Military Hospital, Athlone. Captain W. Mitchell has arrived home from India for duty. Captain W. F. M. Loughnan has been placed under orders for duty on board the transport s.s. *Dongola*, leaving Karachi for Southampton on Feb. 18th. Captain J. R. Lloyd has joined at Aden. Captain H. H. A. Emerson has been transferred from medical charge at Derby to Leicester. Captain W. E. C. Lunn has arrived home from India for duty. Captain R. M. Dickson has been granted six months' leave of absence home from India. Captain D. de C. O'Grady has been transferred from the Military Hospital at Barian to Rawal Pindi Cantonment. Captain A. N. R. McNeill has arrived home for duty from Mauritius. Captain G. G. Collett has been selected as Specialist in Dermatology and Venereal Diseases to the Seventh (Meerut) Division. Captain F. J. Stuart has been granted six months' general leave of absence home from India. Captain J. R. Foster has been appointed to the Military Hospital at Dublin for duty. Captain A. W. Bevis has been transferred from medical charge at Baltray Camp to the Military Hospital at Belfast. Captain R. Rutherford has arrived home for duty from Singapore. Captain C. Scaife has been detailed from the Sixth (Poona) Division for duty on board the transport s.s. *Plassy*, leaving Bombay on March 12th for Southampton. Captain A. W. Byrne has been selected for appointment as Deputy Assistant Director of Medical Services (Sanitary) to the Third (Lahore) Division. Captain F. L. Bradish has been appointed to the Irish Command on arrival home from India. Captain S. S. Dykes has been transferred from the Military Hospital at Dum Dum to Lebong Cantonment.

Lieutenant P. A. With, Lieutenant S. J. Barry, and Lieutenant C. J. H. Little have embarked for a tour of service in India.

INDIAN MEDICAL SERVICE.

Colonel A. O. Evans has been appointed to be a member of the Educational Council by the Lieutenant-Governor of Burma, in succession to Colonel H. St. Clair Carruthers. Colonel W. R. Edwards, C.M.G., has taken up duty as Officiating Inspector-General of Civil Hospitals in Bengal Presidency during the absence on leave of Colonel G. F. A. Harris, C.S.I. The services of Colonel J. Crimmin, V.C., C.B., C.I.E., have been placed at the disposal of the Commander-in-Chief by the Home Department of the Government of India.

Lieutenant-Colonel P. B. Haig has been granted privilege leave of absence home from India for three months, combined with furlough for one year and six months and study leave for three months. The services of Lieutenant-Colonel W. E. Jennings have been placed at the disposal of the Commander-in-Chief by the Home Department of the Government of India. Major E. C. McLeod has been appointed to officiate as Inspector-General of Civil Hospitals in Assam. Brevet-Major J. E. Christophers has been appointed to officiate as Director of the Central Research Institute at Kasauli Cantonment during the absence on two years' leave of Major D. Harvey. Major G. Y. C. Hunter, Superintendent of the Central Jail at Buxar, has been granted six months' extension of leave of absence home from India.

Captain F. P. Wernicke has taken up duty in the Seoni District. The services of Captain F. H. Salisbury, Officiating Superintendent of the Central Jail at Dacca, have been replaced at the disposal of the Home Department of the Government of India. Captain D. Taylor has been appointed to officiate as Assistant to the Director of the Bombay Bacteriological Laboratory in addition to his own duties during the absence on leave of Captain W. D. H. Stevenson. The Governor of Bombay has selected Captain A. F. Hamilton as Officiating Deputy Sanitary Commissioner for the Central Registration District. Captain S. C. Chuckerbutty, plague medical officer in Burma, has been appointed to officiate as Port Health Officer at Rangoon. Captain A. S. Leslie has been appointed to officiate as Assistant Superintendent of the Government Maternity Hospital at Madras. Captain F. C. Fraser has taken up duty at North Arcot as District Medical Officer. Captain H. M. Brown, Deputy Sanitary Commissioner of the Bihar District, has been appointed to officiate in sanitary charge of the Chota Nagpur District. The services of Captain R. E. Flowerdew have been placed temporarily at the disposal of the Government of Madras Presidency for employment in the Jail Department. Captain R. L. Gamlen has been transferred to the temporary half-pay list. Captain N. M. Wilson has taken up duty at Gurdaspur.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant William H. Johnston is confirmed in his rank.

George Albert Cole, late Cadet Colour-Sergeant, Durham University Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated Dec. 14th, 1913).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd North Midland Field Ambulance, Royal Army Medical Corps: Captain Albert J. Riddett to be Major (dated Feb. 7th, 1914).

1st Northern General Hospital, Royal Army Medical Corps: Captain William J. Phillips resigns his commission (dated Feb. 7th, 1914).

1st Western General Hospital, Royal Army Medical Corps: Captain Claude Rundle to be Major (dated Feb. 7th, 1914).

1st Highland Field Ambulance, Royal Army Medical Corps: Major Thomas Fraser to be Lieutenant-Colonel (dated Nov. 1st, 1913).

3rd Northumbrian Field Ambulance, Royal Army Medical Corps: James Maurice Foord to be Lieutenant (dated Dec. 21st, 1913).

1st West Riding Field Ambulance, Royal Army Medical Corps: Henry Norman Goode to be Lieutenant (dated Dec. 9th, 1913).

3rd West Riding Field Ambulance, Royal Army Medical Corps: Captain John W. Stokes to be Major (dated Feb. 11th, 1914).

West Riding Clearing Hospital, Royal Army Medical Corps: Captain Francis Darlow, from the 1st West Riding Field Ambulance, Royal Army Medical Corps, to be Captain (dated Feb. 11th, 1914).

Sanitary Service: Lieutenant John James Buchan, from the 3rd West Lancashire Field Ambulance, Royal Army Medical Corps, to be Captain, whose services will be available on mobilisation (dated Jan. 7th, 1914).

For Attachment to Units other than Medical Units.—Surgeon-Captain Edward Churchill Stack, from the 6th Battalion, The Prince of Wales's (North Staffordshire) Regiment, to be Captain (dated Feb. 11th, 1914).

John George Cooke to be Lieutenant (dated Jan. 2nd, 1914).

William John Phillips (late Captain, 1st Northern General Hospital, Royal Army Medical Corps) to be Lieutenant (dated Feb. 7th, 1914).

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The February issue of this journal opens with a paper by Major L. W. Harrison on Complement Deviation in the Diagnosis of Gonococcal Infections. He has made a number

of experiments with a view to increasing the delicacy of the test in diagnosis and gives the results of 121 specimens of serum from 88 persons. The author concludes that it is reasonable to expect that the method which he describes will give a high percentage of positive reactions in cases of chronic urethritis. In a Suggestion as to a Method of Preventing the Occurrence of Typhoid Carriers, Captain R. G. H. Tate discusses the type, preparation, and dose of a vaccine which should be given as a routine practice in every case which looks like enteric until it is proved not to be so, and asks what reasons can be advanced against carrying out a course of treatment which entails no suffering for the patient, which is quite safe, and does not interfere with any other treatment which the particular medical officer in charge of the case pins his faith to, and which may lead to very great benefit to the patient and those around him. Some Observations upon 31 Cases of Multiple Peripheral Neuritis amongst European Troops in India, by Captain R. C. Priest, is among the other contents of this issue, which includes a paper on the Morphology of Various Strains of the Trypanosome causing Disease in Man in Nyasaland—the Wild Game Strain, by Surgeon-General Sir David Bruce, Major David Harvey, Major A. E. Hamerton, and Lady Bruce, reprinted from the Proceedings of the Royal Society; an article on Colloids, by Colonel R. H. Firth; and a paper on the Life and Work of Jean Dominique, First Baron Larrey,[1] read before the United Services Medical Society, by Surgeon-General Sir Launcelot Gubbins.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

LIVERPOOL.

The Royal Infirmary.

THE annual meeting of the trustees of the Royal Infirmary was held on Feb. 4th, the Earl of Derby—the retiring President—occupying the chair. Notwithstanding an excellent record of work, the committee had again to lament that the income was not in proportion with the expenditure, and anxiety was expressed as to the future of this and other voluntary hospitals. Lord Derby said their financial position was common to all medical charities, and that without doubt the Insurance Act was responsible to a certain extent for the falling off of contributions. Attention was drawn to the inadequate condition of the present accommodation for the nurses, and an appeal will shortly be made to the public for funds to build a new nurses' home. Mr. Holford Harrison, the honorary treasurer, presented the annual report. He stated that most substantial and useful gifts had been received from various sources, and the committee wished to put on record their appreciation of this kind assistance. From the Liverpool corporation the sum of £5000 had been received towards the cost of the building of the new out-patient department in fulfilment of the undertaking. The special appeal made by the *Liverpool Daily Post* raised a sum of £2155, which enabled the committee to purchase 130 milligrammes of radium. Since the Insurance Act came into operation the records showed that of the in-patients admitted nearly 28·5 per cent. were insured persons, and of those treated in the out-patient department about 18·5 per cent. The hospital had been recognised by the Local Government Board as an institution for the treatment of tuberculous disease (pulmonary tuberculosis excluded). The construction of the new buildings for the School of Tropical Medicine had been delayed owing to labour troubles, but was now progressing satisfactorily. During the year, through the generosity of an anonymous donor, the electrocardiograph had been installed in the electrotherapeutic department. The total number of in-patients admitted was 4087, an increase of 63, as compared with the previous year. While the number of out-patients was almost the same as in 1912, there had been an increase of over 8000 re-attendances for the dressing of wounds and minor injuries. With increased work the committee regretted to report a reduction of £107 in the total subscriptions received. In the Hospital Sunday and Saturday Funds contribution there was a drop of nearly £500. Mr. Wade Deacon, the chairman of the committee, seconded the adoption of the report. The Lord Mayor (Mr. H. R. Rathbone) proposed a vote of thanks to Mr. Holford Harrison for his services as treasurer and his acceptance of re-election to that office. Referring to the difficulty of obtaining funds for charitable institutions, the Lord Mayor did not altogether agree with Lord Derby's diagnosis as to the cause of the difficulty—i.e., that it was due to the Insurance Act—but attributed it rather to increased facilities of communication, so that more people were residing outside the city area and became less conscious of the needs of those who resided in the city and of their responsibilities to the city in which their money was made. The charities of Liverpool were to a very large extent supported by a small number of extremely generous people. Votes of thanks to the medical staff having been passed, the Marquis of Salisbury was elected President for the ensuing year.

The Treatment of Tuberculosis.

The city council has given its assent this month to the complete scheme of the port sanitary and hospitals committee for the prevention and treatment of tuberculosis. The deaths from all forms of tuberculosis in Liverpool have averaged 1591 per year for the last three years. There are approximately some 4000 cases per annum to be treated. The corporation had 80 beds at the Fazakerley Hospital and 200 beds at the Park Hill Hospital for the treatment of pulmonary tuberculosis, and about £8000 a year has been spent. Arrangements have also been made with various general and children's hospitals for the treatment of non-pulmonary cases of tuberculosis. The new scheme will gather in every existing agency of treatment and add new accommodation that will give 480 beds at Park Hill and Fazakerley for adult consumptives and 150 beds for children. The beds at the Kingswood Sanatorium, Delamere Forest, will also be available, as well as beds in the local hospitals and infirmaries. There will be three institutions for dispensary treatment—at Mount Pleasant (the Chest Hospital), at Dingle Hill, and at Netherfield-road North. Domiciliary treatment and research work also find a place in the scheme. The total cost is estimated at £62,250. Towards this, however, there is a Government grant (from the Finance Act of 1911), leaving a balance of £42,500 to be raised by loan. The cost of administering the whole scheme, including cost of patients, maintenance of dispensaries, salaries of medical, inspectorial, and clerical staffs, &c., is estimated at about £40,000 per annum. Towards this the Insurance Committee makes a grant of £8250, the Treasury pays £15,580, and the ratepayers also find £15,580. The complete scheme is generally regarded with satisfaction.

Wallasey Cottage Hospital.

The annual meeting of the subscribers of the

[1] THE LANCET, Jan. 3rd, 1914, p. 34.

Wallasey Cottage Hospital was held at that institution on Feb. 8th, Mr. R. W. Preston, J.P., presiding. Mr. E. S. Wilcox, in presenting the forty-eighth annual report, which he described as probably the worst in the history of the hospital, said the burden of debt with which they began the year had considerably increased in spite of the urgent appeals then made at the time of great prosperity in the business world. Experience showed that although the Insurance Act was now in full operation, the need for voluntary hospitals was as great as ever, and an urgent appeal was made for further subscriptions.

Medical Students' Annual Dinner.

The medical students' annual dinner was held at the Exchange Station Hotel on Jan. 31st, Dr. T. B. Grimsdale being in the chair and Mr. R. E. Kelly in the vice-chair. Over 100 of the students and teaching staff were present, and the evening proved a very enjoyable one.

Feb. 9th.

MANCHESTER.

The Finances of the Royal Infirmary.

THE considerable sum of £7000 is still wanted for the new central branch for accidents and out-patients. An appeal was made for £25,000 to enable the new branch to be opened free of debt, but so far only £18,000 have been promised or received. In the Royal Infirmary itself the number of in-patients under treatment during the year, as will be seen from the annual report which has just been published, was 9049, as compared with 8575 in 1912—i.e., an increase of 474. None the less, the infirmary has not been able to cope with the demand upon its in-patient accommodation, for on Dec. 31st of last year no fewer than 548 persons were waiting to enter the hospital for the purpose of undergoing operations of a serious character. A new surgical unit of 60 beds is shortly to be opened. This will entail an additional annual expenditure of £3000. In order to enable the ordinary income to meet the ordinary expenditure £9271 is needed.

Hospital Sunday in Manchester.

Hospital Sunday was observed on Feb. 8th, and everywhere throughout the town notices were widely placarded. There is no doubt that the needs of the medical charities have greatly increased, while the financial help from the churches has diminished. Birmingham and Liverpool subscribe twice as much as Manchester on their Hospital Sundays. The amount subscribed in Manchester last year was only £3135, as compared with £6248 in 1874. Last year the expenditure of the hospitals and other medical charities advanced by £10,000, the total number of patients treated being 344,000. The Lord Mayor has made an appeal for £6000 this year. The actual expenditure of the hospitals last year was £148,000, resulting in a deficit of £20,000 on the ordinary income of the hospitals.

Annual Meeting of the Hospital for Skin Diseases.

At the annual meeting of the subscribers to the Manchester Hospital for Skin Diseases on Feb. 6th it was stated that the debt amounts to £1410. A fact of some importance was reported—viz., that apart from private patients the hospital received £970 in voluntary contributions from the poor people who were treated in the hospital, and this was more than was received from the outside public. Complaint was made of the inadequate support received from outside towns which sent in large numbers of patients. Bolton sent during the year 204; Bury, 186; Crewe, 172; Macclesfield, 155; Oldham, 515; and Stockport, 480.

Estate for Sanatorium at Rochdale.

The Rochdale town council has decided to purchase an estate of about 100 acres called the Springfield estate, Marland, for the purpose of a sanatorium for the treatment of tuberculosis. It is situated about one mile from the centre of the town and will cost from £12,000 to £13,000. About 16 acres will be utilised for the present scheme, and the mansion house will be used as an administrative block.

Bequests to Manchester Charities.

Mr. James Ferguson Power, of Eccles, has left £2000 to St. Mary's Hospitals and the Manchester and Salford Lying-in Hospital and Dispensary; £1000 to the Manchester Infirmary, Dispensary, and Lunatic Hospital or Asylum; and £500 to the Manchester and Salford Blind Aid Society.

Altrincham Hospital.

The appeal of the board of management for the completion of the fund for the enlargement and equipment of this hospital, which was made a week ago, has already resulted in the receipt of £1900 towards the £5000 required.

Meeting of the British Association in Manchester in 1915.

Manchester is taking time by the forelock and has begun already to make preparations for the meeting which will begin on Sept. 8th, 1915. At a meeting held on Feb. 3rd in the Town-hall to make arrangements for the reception of the association in the city a local executive committee, representative of every interest in the city, was appointed, and it was also resolved that a local fund should be raised to defray the expenses of the meeting. This will be the fourth visit of the association to Manchester. The first visit was in 1842, the second in 1861, and the third in 1887, when Sir Henry E. Roscoe was president, and which was one of the greatest meetings in the history of the association. The actual number of members reached 3833.

Negligence of Panel Patients.

New medical cards under the National Insurance Act have been issued in Manchester. The negligence of persons entitled to medical benefit under the Act in Manchester is almost incredible. Through the "dead letter" office no fewer than 54,000 medical cards posted by the Manchester Insurance Committee have been returned. Nearly 280,000 medical cards were sent out, so that about one-fifth of the whole issue failed to be delivered owing largely perhaps to change of address. Meanwhile the Manchester Committee has met the difficulty by issuing special circulars to medical practitioners requesting that:

> Until further notice doctors will not refuse medical treatment to an insured person who has not yet received his new medical card, but can produce the old medical ticket or other satisfactory evidence of his eligibility for medical benefit.

Feb. 10th.

SCOTLAND.

Mentally Defective Children in Edinburgh.

THE health committee of the Edinburgh school board, who have been considering the Mental Deficiency and Lunacy (Scotland) Act, 1913, which comes into force on May 15th next, recommend that, with a view to ascertaining what additional provision will be required for the education of mentally defective children, a complete survey be made of all children within the board's district between the ages of 5 and 15 who come within the scope of the Act. The recommendations are embodied as follows:—

1. That an enumeration be made by the attendance officers of all children in the city between the ages of 5 and 15, who are mentally defective within the meaning of the Act.
2. That a survey be made of all children attending the board's special schools, with a view to ascertaining how many of these may be considered as uneducable.
3. That a survey be made of the elementary day schools for the purpose of ascertaining how many children are in attendance at these schools who may be considered as defectives within the meaning of the Act.

Having obtained a complete list of children to be dealt with, it will thereafter be necessary to classify them into two groups—(*a*) children who are considered educable; (*b*) children who are considered non-educable. In the case of the latter group the names and addresses will be forwarded to the parish council, whose duty it will be to make the necessary provision for them. A similar list has also to be sent to the General Board of Control. The question of obtaining the services of a mental specialist to advise in regard to the classification of cases was delayed for further consideration.

Treatment of Ringworm in Edinburgh School Children.

The school board have made arrangements whereby X ray treatment for ringworm and favus may be given. Previously a large proportion of these children have been attended to at the special department of the Children's Hospital. Under the new agreement with the managers of the Royal Infirmary, treatment is to be given to three scholars per diem, which means that, for a school year of 40 weeks, 720 cases would be treated during that time. Treatment at the Lauriston Skin School is to be carried out during the holidays, so that for a whole year of 52 weeks 936 nominal cases would be treated.

The Northern Nursing and Midwifery Conference at Glasgow.

This conference has been held this week in the Zoo Buildings, Glasgow. It opened with a popular address on Scientific Knowledge and Method in Relation to the Nursing Profession, by Dr. Carstairs C. Douglas, on Feb. 7th. On Feb. 9th, at 3 P.M., under the presidency of Miss Haldane, papers were read on Nursing in the Navy, Army, and Territorial Forces, and Dr. H. Martyn-Clark dealt with missionary nursing. In the evening Dr. A. K. Chalmers, medical officer of health of Glasgow, read a paper on the Need for a Midwives Act in Scotland. Other papers dealt with Poor-law and school nursing. In the afternoon of Feb. 10th Dr. W. Leslie Lyall took for his subject the Tuberculosis Dispensary as a Sphere for Nurses. In the evening the subjects for discussion were Fever and Mental Nursing. On the last day of the conference in the afternoon Dr. E. Thomson addressed the members of the congress on the Importance of Ophthalmic Training for Nurses, and in the evening Dr. Anne L. McIlroy discussed Some Problems in the Treatment of Venereal Disease.

Aberdeen Royal Infirmary.

The annual report of the Aberdeen Royal Infirmary states that a total of 2919 patients were admitted during the year, the average number of beds in occupation being 228, and the average length of stay 26 days. These averages are higher than in 1912. 2037 operations were performed upon in-patients. The death-rate was 8 per cent. of all treated cases, but if the number (66) of patients who died within 48 hours of admission be deducted, it gives a death-rate of only 5·9 per cent. 17,054 out-patients received advice and treatment during the year. The ordinary income for the year was £11,202 12*s.* 7*d.*, and the ordinary expenditure was £15,121 4*s.* 8*d.* Church collections continue to decline, contributions from employees also are smaller, but voluntary contributions by or on behalf of patients have increased, and include several from Approved Societies in recognition of treatment of their members. The average cost per occupied bed was £62 11*s.* 8*d.*, and of each in-patient £4 10*s.* 11*d.*, both slightly higher than in the previous year. During the year Professor W. Stephenson resigned office as infirmary gynæcologist, and Dr. R. G. McKerron, who succeeded to the chair, was appointed in his stead. It was decided to appoint a third anæsthetist, and Dr. W. Anderson was appointed. Many children from board schools attend the electrical department of the hospital, and the Aberdeen school board, recognising this, have placed a complete X ray outfit in this department. This outfit will remain the property of the school board, but is available for general use. The new ear, nose, and throat wards were opened in November for the reception of patients. Extensive alterations are in progress with regard to nurses' and resident medical officers' accommodation, and other improvements are under consideration.

The late Dr. P. Mitchell.

The death took place on Jan. 30th, at his residence, Old Rayne, of Dr. Patrick Mitchell, after an illness of only a few days' duration. Dr. Mitchell was the son of a medical man practising in Old Rayne, and after graduating at Aberdeen University, he soon settled down, on the death of his father, to carry on the family practice. He was a man of high ideals and great kindness of heart, much beloved by those who were brought into contact with him professionally or socially. Although a very busy man, he was keenly interested in all the affairs of the countryside. Dr. Mitchell was 66 years of age, and is survived by a widow, three sons, and a daughter, all of the sons following the same profession as their father.

Feb. 10th.

IRELAND.

The Royal College of Surgeons in Ireland.

AT the last meeting of the council of the Royal College of Surgeons, Sir Lambert Hepenstal Ormsby was elected representative of the College on the General Medical Council. Sir Lambert Ormsby was President of the College from 1902 to 1904, and is senior surgeon to the Meath Hospital.

Funds of the Irish Medical Committee.

In its constitution the Irish Medical Committee is thoroughly representative, and in its work it has retained the confidence of the profession. It

was hoped till recently that the most difficult of the questions arising out of the National Insurance Act were nearing settlement, but the outlook is not now so hopeful, and there may still be a long fight before the profession, in which the existence of an authoritative committee, such as the Irish Medical Committee is, will prove a necessity. It is, therefore, disappointing to find that only about one-fifth of the profession in Ireland has subscribed to the funds of the committee. If it is to carry on its work further financial support must be forthcoming.

Whole-time Certifiers.

At its last meeting the Irish Medical Committee had before it the proposal put forward by the Friendly Societies that whole-time medical officers should be appointed to furnish certificates under the National Insurance Act. Several instances were brought before the committee of insured persons being unfairly deprived of their benefits on the advice of a "medical adviser," and of injury to insured persons from being compelled to resume work against the advice of their own medical attendants. A resolution was unanimously passed to the effect that the Irish Medical Committee cannot acquiesce in any scheme of whole-time certifying medical officers, knowing from past experience that such would prove injurious to the efficient treatment of sick persons.

Health of Belfast.

During the period between Dec. 14th, 1913, and Jan. 17th, 1914, which covers the report of the medical officer of health, as presented to the city corporation of Belfast on Feb. 2nd, there were notified 375 cases of infectious diseases, as compared with 528 in the previous five weeks, and 195 in the corresponding period of last year. Of these 375 cases, the greater number (292) were scarlet fever. From zymotic diseases the death-rate was 2·1, from chest diseases it was 8·1, and the general death-rate was 22·6. During the five weeks referred to 38 cases of tuberculosis were notified, being an increase of 11 on the preceding five weeks and also on the corresponding period of last year.

Speed Limit for Motor-cars.

The police committee of the corporation of Belfast some time since passed a resolution recommending the city council to apply for powers to impose a speed limit on motor-cars of six miles an hour. This was subsequently altered to ten miles, but on Feb. 2nd the council decided, by a large majority, to delete from the minutes of the police committee all reference to a speed limit, the feeling being—and this view was also agreed in by the police—that the proper course was to leave to the authorities the right of prosecuting any motorist whose speed of driving, no matter what it was, was dangerous to the public safety.

Suspension of Nursing Staff.

The Strabane board of guardians at its meeting on Feb. 3rd decided to suspend the nurses in the fever hospital in that town pending a proposed inquiry. In the meantime arrangements have been made to appoint substitutes.

A Milk Depôt for Belfast.

Dr. H. O'Neill has announced that, through the kindness of two friends of children, he has received a sum of £330 for providing and equipping a milk depôt in Belfast to distribute pure milk on a reasonable basis to the poor of the city. This arrangement will be carried out for a year, provided the Belfast city council will then take control of the depôt and work it efficiently for at least five years, appointing the chairman and vice-chairman of the public health committee and other members of the council as a subcommittee to carry out the details of the scheme. Dr. O'Neill points out that the principal dairies of Copenhagen supply the best quality of pure cows' milk, which is neither pasteurised nor sterilised, and which is kept cool and delivered to the consumers in the same condition as it left the udders of the cows. He recommends the adoption of a similar plan.

Feb. 10th.

PARIS.

The Control of Private Disinfection at Paris.

FOR ten years notification of certain infectious diseases has been compulsory in Paris, and such notification is followed automatically by disinfection at the hands of a specially organised municipal service at an appointed tariff based upon the rental of the premises. Not a few persons, however, prefer to do the disinfection themselves or to have it done by some industrial firm, in which case, to avoid the intervention of the municipal service, the medical attendant when notifying the disease has to give his personal guarantee that the disinfection shall be efficiently conducted. The methods of official disinfection are very objectionable. The spraying with corrosive sublimate often injures metallic objects and gilding, and it has frequently happened that the official workmen have caused irretrievable damage in well-furnished apartments to carpets, decorations, and so forth. But as it was found that the undertaking to have the place privately disinfected was often not kept, but was given merely to obviate a visit from the municipal disinfectors, the Conseil Municipal has created a new service to supervise privately undertaken disinfection. In future those who wish to make their own arrangements for disinfection must undertake in writing: (1) To have it done without delay and in accordance with the instructions issued by the Conseil Supérieur d'Hygiène Publique de France, as approved by the Minister for the Interior, a copy of which is sent; (2) to advise the control service at least 12 hours in advance of the time of the disinfection: (3) to submit to the control of this service. The new control service, which will be under the direction of M. Cambier, chief of the laboratory of hygiene of the City of Paris, will consist of a clerk, four chemists and bacteriologists, and an attendant. The necessary expenses of the new organisation will be 29,800 francs.

A Campaign against Leprosy.

The Direction de l'Hygiène at the Ministry of the Interior, whose chief is M. Mirman, has prepared a Bill intended to check the increasing development of leprosy in France. The Bill having been referred, as the law directs, to the Conseil Supérieur d'Hygiène, a report thereon by M. Netter, which was approved by the Council, was then presented to the Académie de Médecine, where a lively discussion ensued. M. Netter recognised that leprosy to-day is by no means so contagious as formerly, and indeed is only exceptionally so and in a limited fashion. The rigorous measures of the Middle Ages, which cut off the leper completely from social life, are not therefore demanded now. There are at the Hôpital St. Louis some 12 to 15 lepers who are allowed relative liberty and have never conveyed any direct

contagion, and the same is the case at other hospitals. Moreover, that the disease is not hereditary, he said, is shown by the fact that in America there were lepers among the immigrants of two or three centuries ago, yet in 1888, when an inquiry on this subject was instituted, it was found impossible to find any among their descendants. It would seem that leprosy is contagious only in a completely unhygienic environment, consequently it is necessary to exercise an effective control, but one which in view of the long duration of the disease shall be much less rigorous than that practised uniformly in all the contagious and epidemic diseases. The report considers it would be useless, therefore, to create special establishments for confining lepers in localities where contagion does not occur, and where neither overcrowding nor uncleanliness prevails. Only in the latter case need the lepers be confined, and this measure will have special application to vagabonds and mendicants. It is proposed to refuse entrance to French territory to foreign lepers, and to expel such as are there if they refuse to submit to the French regulations. Lepers incapable of propagating the disease are to be kept under surveillance, however, and forbidden to exercise certain occupations, particularly those concerned with the food-supply, and this surveillance will be extended to those who live with them. Competent medical men will be appointed to check the diagnosis in each case notified to the authorities. They will advise what steps should be taken and control their carrying out. It is held to be necessary to apply the regulations adopted to the colonies and French protectorates, where the problem has a greater importance than in the metropolis. In the discussion that ensued Professor Gaucher opposed these conclusions, holding them insufficient, and delivered a sharp attack on the general attitude of the authorities and M. Mirman. He divided lepers into three classes, each of which requires a different prophylactic organisation: 1. The indigenous lepers, of which a small group has existed for a long time on the Italian frontier of Provence, in Auvergne, and in Brittany. These cases are known to the inhabitants and are practically isolated, so that they spread no contagion. 2. French lepers returning from the Far East, where they have contracted a much more serious form of leprosy, with contagious ulceration. These should be confined in special hospitals and surrounded by rigorous prophylactic measures. 3. Finally, the foreign lepers, whose entry into France should be interdicted, and those already there should have their choice of confinement or leaving the country. In this respect no surveillance exists, and it must be established. He instanced two cases of lepers recently come to Paris. The isolation of colonial and foreign lepers could be accomplished on some island off the seashore, as has been done in other countries. As to the indigenous lepers, it would suffice to take a census of them and subject them to local surveillance. The isolation at home, of which the Bill brought forward by M. Netter speaks, Professor Gaucher considered to be impracticable. If the leper appeared to be but slightly affected the surveillance would soon relax until it ceased; if he showed ulcerations and required medical care the danger would be just as great for his *entourage*, and complete isolation in hospital would be preferable. After a close vote, which supported the first two of M. Netter's conclusions, the Academy finally referred the entire report for re-examination by the Special Commission.

The Nobel Prize for 1914.

The Academy of Sciences and the Caroline Institute of Stockholm, in whose hands lies the awarding of the Nobel prize, have begun to draw up the lists of candidates for the prize of 1914. The faculties and societies of France that have been consulted as to the French choice have unaminously nominated Professor Bouchard.

Kala-azar at Marseilles.

A child in a Marseilles hospital has been found to be suffering from kala-azar, or leishmaniasis. At the suggestion of Dr. Nicolle, director of the Institut Pasteur at Tunis, Dr. Pringault examined 50 cadavers of dogs at the home for stray dogs at Marseilles, and discovered signs of leishmaniasis in the bone marrow of one of them. The disease, therefore, is existent there, though it has not hitherto been noted. In point of fact, kala-azar is to be found in all the large towns of the Mediterranean, and even at Rome and Turin. The disease attacks only infants from 6 months to 3 years of age, and is nearly always fatal. The transmission of the parasite by dog fleas having been well established, the Société de Pathologie Exotique has called on the Government to take measures to prevent the ingress of dogs from countries where kala-azar is endemic. An inquiry held at Marseilles seems to show that the case observed by M. Pringault is an isolated one, for the other veterinary surgeons of Marseilles have never observed this disease before. The exaggerated statements of the lay press, however, which confounded kala-azar with Indian plague, created quite a panic for many days.

Feb. 9th.

BUDAPEST.

The Sick Clubs and the Medical Profession.

SINCE the coming into force of the new Workmen's Insurance and Compensation Act the membership of sick clubs in industrial centres and in cities and towns in general has increased immensely with a proportionate falling off in the number of paying patients belonging to the so-called middle classes. In towns containing only a moderate number of industrial undertakings the members of sick clubs are from 26 to 30 per cent. of the inhabitants, while in those which depend mainly on factories, workshops, and similar industrial establishments this proportion rises to 45 or 50 per cent. It is therefore easy to understand that the medical profession looks unfavourably on associations which aim at supplying well-to-do persons with medical aid at low rates. An incident of this kind has occurred at Nagyvarad, where the Baron Hirsch Society, so called after the well-known philanthropist, now deceased, requested the local branch of the Hungarian Medical Association to allow members of the association to occupy two positions with annual salaries of 2000 kronen each (£80), the number of members belonging to the society in question being only 140. The branch association refused the society's request, and the members of the branch have unanimously resolved to decline attending patients connected with the society. The motive for this is not insufficiency of the remuneration offered, because 2000 kronen per annum are fair remuneration for

attendance on 70 families, but the association is opposed to any society or combination formed for the purpose of extorting cheaper medical aid from a profession which is so crippled by the Insurance Act. The Hirsch Society has now been advertising for more than six weeks, inviting applications from medical men willing to fill the positions in question, but to the credit of the medical profession it has not yet found a single candidate in the whole country.

Hæmorrhagic Small-pox in Servia.

The Minister of Public Health recently issued an official report announcing that our country is entirely free from cholera, and now a new epidemic is threatening us from Servia, where in the second half of January there was an outbreak of hæmorrhagic small-pox with about 100 cases and 30 deaths up to the present time. The Servian Minister of Internal Affairs has ordered compulsory vaccination. The disease has now spread into Hungary where the first three cases of hæmorrhagic small-pox occurred on Jan. 30th. The Hungarian Minister of Public Health has declared that if further cases occur in any other part of Hungary, he will order compulsory vaccination of all persons living in the infected area.

Conflict between the Insurance Companies and the Hungarian Medical Congress.

At the annual Congress of the Hungarian Medical Association held last September the subject of the fees for making medical examinations for life insurance companies was considered, and it was resolved that when the sums insured were under 5000 kronen the fee should remain at 10 kronen, but that for sums of 5000 kronen and upwards a fee of 20 kronen (16*s.* 8*d.*) shall be charged. Although the medical profession has not raised these fees since the year 1888, and although the present increase is moderate, the elected committee of the insurance companies have declared that they will not consent to the proposed increase, but will rather dispense with medical examinations when the sum insured is under 5000 kronen (£200), and thereby deprive the profession of a considerable income, because in Hungary insurances for even 1000 kronen can be effected, and the fee even in such cases was 10 kronen. If the insurance companies dispensed with these examinations, then they will have to pay the fee of 20 kronen asked when the sum insured amounts to 5000 kronen and upwards. The association cannot modify the resolution of the Congress, which will accordingly be binding on the members, although several branches of the association are in favour of the insurance companies, which quite recently proposed a compromise—namely, that they shall pay 15 kronen for insurances between 5000 and 10,000 kronen. With this modification our fees would be equal to those paid by the insurance companies in Austria and Croatia. The association has sent circulars to all its members informing them that to make insurance examinations for fees lower than have been decided by the association would result in the other members of the association breaking off professional relations with them.

The New Hungarian Universities.

The foundation-stones of two new universities will be laid this year, one in Pozsony (Pressburg), about 40 miles from Vienna, and the other in Debreczen, the most considerable town in the midst of the great Hungarian plain. The universities will have four faculties—namely, theology, law, philosophy, and medicine. The three former will commence work at the end of the present year, but the medical faculty will be in abeyance for the next two or three years because the large university hospitals which are in course of erection will require several years for their completion. There will be difficulty in deciding where the necessary professors are to be got. In Hungary it has been the custom for many decades that people desiring to have the best medical advice go to the capital. This, of course, is extremely profitable for the university professors, their annual incomes varying from 100,000 to 400,000 kronen (£4000 to £16,000). Of course, a Budapest professor cannot be expected to exchange his chair in the capital of the country for a chair in a provincial university, where even his salary would be less. In the provinces, though there are excellent practitioners in great number, there are few who could fill the positions in the universities. For these reasons the Minister of Public Instruction has advised the directors of the various clinics to employ henceforth twice as many demonstrators and other assistants as before in order to have a staff from which the fittest might be selected to fill the chairs of the new universities.

Responsibility of a Medical Man for the alleged Death of a Patient from Poisoning.

In a large provincial town a patient in a charity hospital was ordered to take tincture of digitalis with tincture of strophanthus, the quantity dispensed being 40 grammes (1½ oz.). These large quantities were dispensed partly from economical motives, because two bottles containing 20 grammes each cost nearly twice as much as one bottle containing 40 grammes, and partly because the man was suffering from uncompensated heart failure, so he would have to take the medicine for a considerable time. It happened, however, that the patient, who was an uneducated person, thought fit to drink the whole bottleful at once, in order to be "quickly cured," and this he did when the nurse had left the ward for a few minutes. In about an hour he felt sick, went out of the ward, vomited, and afterwards proceeded to the water closet, where he was found dead in the course of ten minutes or so. At the inquest the police pathologist stated that the man died from syncope. The internal organs were sent to the forensic laboratory for chemical analysis, but the experts there could not satisfy themselves that poison was present in a quantity sufficient to cause death. Notwithstanding this evidence the physician of the ward and the nurse were charged with manslaughter by carelessness. The court was of opinion that a drug which contained poison ought to be kept in a special poison receptacle, as directed by the hospital rules, but this the accused neglected, and therefore they were responsible for the death of the patient. Evidence was given that it would be impracticable to keep such drugs as tincture of digitalis in a special receptacle perpetually locked up. It was shown that in this case the patient being a man of advanced age with an incurable disease might die suddenly from heart failure, and this was the more probable as he had already vomited up his medicine. On account of mitigating circumstances both the physician and the nurse were acquitted, although the public prosecutor appealed to the higher court in support of his contention that they ought to be punished.

Feb. 8th.

UNITED STATES OF AMERICA.

Twenty-third Annual Meeting of the Western Surgical Association of the United States.

THE annual meeting of the Western Surgical Association was held in St. Louis, Mo., on Dec. 19th and 20th, 1913. The presiding officers were: Dr. Jabez N. Jackson, Kansas City; Dr. J. K. Eastman, Indianapolis; and Dr. M. G. Seelig, St. Louis. The list of papers read was very long. Among those of great interest were the Treatment of Blood-vessels, by Dr. W. W. Grant, Denver; Treatment of Sinuses from Hip Disease by means of Bismuth Paste, with report of 100 cases, by Dr. Emil G. Beck, Chicago; and Studies on the Function of the Periosteum, by Dr. James E. Moore, Minneapolis. A symposium was held in which Jackson's veil or pericolonic membrane was discussed by Dr. Daniel D. Eisendrath, Chicago, Dr. Eastman, and Dr. Howard Hill, of Kansas City. Papers were also read by Dr. Charles H. Mayo, Rochester, Minn.; Dr. Carl B. Davis, Chicago; Dr. Oliver J. Fay, Des Moines, Iowa; and other well-known western surgeons. Dr. W. Seaman Bainbridge, New York, gave a long and clear exposition of Sir Arbuthnot Lane's theory of the causation of intestinal stasis.

Appointments.

The Governor of New York State has appointed Dr. Hermann M. Biggs to be Commissioner of Health of New York State. Dr. Biggs has taken an active part in the administration of the New York City Department of Health for the past 20 years, and has been one of the moving spirits in the reforms which have rendered that department prominent among the health boards of the world.—President Wilson has nominated Colonel William C. Gorgas Surgeon-General of the United States Army, in succession to the late Surgeon-General Torney. Colonel Gorgas's achievements in Cuba and Panama are well known. He is at present in South Africa.—Dr. S. S. Goldwater has been appointed head of the New York City Department of Health. Dr. Goldwater, who up to the time of his appointment was superintendent of Mount Sinai Hospital, is well known as an authority on hospital construction.

The American College of Surgeons.

At a meeting of the Board of Regents of the newly established American College of Surgeons held in New York on Jan. 9th the following officers were elected: President, Dr. J. M. T. Finney, Maryland; First Vice-President, Dr. W. W. Chipman, Quebec; Second Vice-President, Dr. Rudolph Matas, Louisiana; Treasurer, Dr. Albert J. Ochsner, Illinois; General Secretary, Dr. Franklin H. Martin. Members of the Board of Regents: J. M. T. Finney, Maryland; Albert J. Ochsner, Illinois; Franklin H. Martin, Illinois; George E. Brewer, New York; George E. Armstrong, Quebec; John B. Murphy, Illinois; Edward Martin, Pennsylvania; Frederic J. Cotton, Massachusetts; Herbert A. Bruce, Ontario; Charles F. Stokes, Washington, D.C.; William D. Haggard, Tennessee; George W. Crile, Ohio; Robert E. McKechnie, British Columbia; Charles H. Mayo, Minnesota; and Harry M. Sherman, California.

Typhoid Fever in the United States.

A report has been recently published by the Central Council of Public Health of the City of New York on last autumn's typhoid fever epidemic in the borough of Manhattan. The report points out that a comparison of the typhoid death-rates in Europe—e.g., 2·5 per 100,000 in Hamburg, 3·6 in Berlin, 4·0 in London, 4·1 in Vienna, and 6·7 in Paris—with the typhoid death-rates of 11·6 in New York, 11·6 in Boston, 13·7 in Chicago, 17·4 in Philadelphia, and 23·2 in Washington, D.C., strikingly indicates how much more remains to be done along the lines of prevention of this disease in this country. The report shows that the Manhattan outbreak had its origin in infected milk. The authors of the report, Dr. Donald H. Armstrong and Dr. E. H. Lewinski Corwin, urged efficient pasteurisation of all raw and certified milk and more rigorous enforcing of the notification laws. Hospitals are frequent offenders in this last respect.

The Wisconsin Eugenics Law Quashed.

The Wisconsin eugenics law, which provides for the issuing of marriage licences only upon the production of a certificate from a medical man stating that the individuals concerned are in a physical and mental condition sufficiently satisfactory to warrant marriage, has just been declared unconstitutional in the Wisconsin courts. The presiding judge held that the law was of unreasonable limitation so far as the physician's fee was concerned, and that it was an unreasonable and material impairment of the right of persons to enter into matrimony. The court further held that if the State wished to exercise its right to prevent undesirable marriages it should assume the burden of weeding out the unfit, and thereby not cast upon the fit an unfair demand, and thus materially impair an inalienable right.

Jan. 30th.

SOUTH AFRICA.

District Surgeons' Grievances.

As in the case of the Railway Medical Service discontent is spreading amongst the district surgeons of the Union. These have formed an association, the South African District Surgeons' Association, the object of which is the promotion and protection of their interests. At the present time the position and status of a district surgeon is unsatisfactory in every respect. In the four provinces there are widely different rates of pay and allowances, and the most divergent duties are assigned to them. Nominally, district surgeons are directly responsible for their work to the Minister, and are under the Secretary for the Interior. As a matter of fact, they are actually at the beck and call of every department of State and of the Provincial Governments, receiving their instructions through the local magistrates. And while the regulations differ in each province, the regulations of each province are interpreted differently by different departments, so that in dozens of points district surgeons do not know how they stand.

South African Shipping Companies: Medical Reform.

The Union-Castle Company has at last come into line with other companies elsewhere by permitting its surgeons to charge fees on board ship in respect of any illness or accident not originating on board. First-class passengers can be charged 5*s.* a visit, second-class 2*s.* 6*d.*, the maximum in either case being for two visits daily. Third-class passengers may not be charged at all. Minor operations are to be charged at visiting rates and major ones at a prescribed tariff. It is understood that other companies intend to follow suit.

Visit of Colonel Gorgas.

Colonel William C. Gorgas, of Panama Canal fame, accompanied by the late chief of the Panama Canal Laboratory, Dr. Dowling, and the late chief inspector of the Panama Canal Sanitary Department, Major Noble, arrived at Cape Town at the end of last year, and entrained at once for Johannesburg. Colonel Gorgas was invited by the Chamber of Mines to come out to South Africa to study the health conditions on the Rand with a view, if possible, of devising means for the prevention of miners' phthisis and more particularly of pneumonia amongst native labourers. One wonders what the Chamber of Mines expects these able officials to achieve in the few weeks for which they were engaged.

The Parliamentary Session.

The work of the present session is likely to be hampered by the split in the ranks of the Government, but it would seem fairly certain that no Bill of any great importance to the medical profession is likely to be introduced. Thus it is definitely stated in official circles that the long postponed Public Health Bill will not be introduced. The same remark applies also to the Medical Bill. As a matter of fact, it is doubtful whether the latter is very keenly wished for at the present juncture. Most of the Ministers have at various times stated plainly their views that South Africa should be thrown open to the medical men of all nations subject to them being qualified to practise in their countries of origin. They have all, or nearly all, denounced "reciprocity," and consequently most members of the profession would prefer not to risk bringing the Medical Acts of the four provinces before Parliament as at present constituted for consolidation, and yet there is the anomaly that a medical man registered in one province is not able to cross the border into another province without registering afresh in that province. More than that, practitioners eligible to practise under the law of one province may be ineligible for registration under the law of another province. The main work of the session will be apparently in dealing with industrial legislation, for which there is no great need in South Africa, and amongst the industrial measures published is a draft Factory Bill. The Bill is not likely to have an easy passage, as although many of its provisions are well thought out it will introduce an element of dual control which is always objectionable. In addition to the Factory Bill an Inquests Bill has been published. This is much wanted, particularly in the Transvaal, and doubtless will be passed into law without much opposition from any party in the House. The Bill contains one objectionable feature—namely, that it contemplates a different scale of fees being paid to medical witnesses in the various provinces.

Jan. 22nd.

INDIA.

Imperial Bacteriological Laboratory.

THE splendid work that is being done at the Imperial Bacteriological Laboratory at Muktesar in the study of epizootics in India is by no means so well known as it should be.[1] Muktesar is a remote spot on a hill about 7500 feet high in the inner Himalayas, some 23 miles north-east of Naini Tal. The first laboratory was built in 1895. Considerable additions have since been made from time to time both to the laboratory buildings and to the estate in which they are situated, and the latter is now over 7000 acres in extent. Work at first was almost entirely concentrated on the investigation of rinderpest, the most prevalent and destructive cattle disease in India. Rinderpest continues to provide the laboratory with its main occupation, but most of the contagious diseases to which Indian cattle are subject have been investigated and a means of checking their spread searched for and in some cases discovered.

Medical Students on Strike.

Word comes from Allahabad of a dispute between the students of the Lucknow Medical College and the principal, which has culminated in a wholesale strike, followed by the closing of the institution for the time being. The students of the college made a joint petition for mercy for two of their body who were expelled, which was refused. They then went on strike.

The Punjab Sanitary Conference.

The official report of the Punjab Sanitary Conference held at Simla in August last[2] has been published in a portly volume of 274 pages. The report is divided into two sections: the record of the proceedings of the conference occupies the first 80 pages, and the remainder of the volume is composed of the correspondence and papers connected with it. The subjects dealt with were: rural sanitation, town planning, sanitation in connexion with schools, administration and organisation, and specific diseases. The resolutions of the Conference, which covered a wide range of subjects, are conveniently brought together at the end of the first section of the report.

Sub-Assistant Surgeons' Conference.

At the final meeting of the eighth annual conference of the All-India Sub-Assistant Surgeons' Association recently held at Rangoon it was decided to make a representation to Government asking that the pay of the sub-assistant surgeons be increased in proportion to the increased cost of living in Burma. It was decided to hold the next conference at Nagpur.

Malaria Campaign in Karachi.

The Karachi Municipality has resolved that a subcommittee be appointed to confer with the cantonment authorities with the object of reporting upon the measures which should be taken for the destruction of mosquitoes, the treatment of stagnant water, and generally for the prevention of malaria.

Mandalay's Water-supply.

Drinking water in Mandalay having been found to be unwholesome, the municipality made a contract with a Rangoon company to sink five artesian tube walls with a view to abandon the ordinary supply. These are now reported to yield in one hour 13,000 gallons of exceptionally good and usable water. A depth of 160 feet was reached in the case of four and 150 feet in the fifth well. Now the whole town is to be supplied with this water, and an additional tube well is being sunk on the Mandalay Hill. A phenomenon occurred on the completion of the boring of the fifth well, when numerous small fish, alive and not blind, came up with the water. A few of these were sent to the superintendent of the Indian Museum, who has classified them as barbus punctatus.

Indian Medical Service.

The following proposals with reference to the

[1] THE LANCET, Jan. 17th, 1914, p. 193.

[2] THE LANCET, Nov. 1st, 1913, p. 1273.

Indian Medical Service are being strongly advocated in a certain section of the Indian press:—(1) The military and civil departments to work entirely independently of each other, and to do away with a system under which all the more lucrative civil posts are filled by members originally recruited for military service; (2) all important Government appointments to be whole-time ones, thus offering more favourable conditions for the establishment of private practitioners; (3) professorial appointments to be recruited directly from England; and (4) improving the present conditions of the subordinate services, both civil and military, as regards pay, &c., and opening up a few more higher appointments to both classes.

Ootacamund.

This queen of hill stations in India is at last to have an improved slaughter-house on a better site. The Government has decided to give Rs. 25,000, equal to the cost of constructing slaughter-houses to the design and scale of the existing buildings, provided the latter and the present site on which they stand are handed over to Government. The plans and estimates for the new buildings amount to Rs. 43,900. The council has deferred acceptance until it has the opinion of a competent authority. The council has brought forward proposals for a new reservoir for an additional supply of water, but the sanitary engineers have replied that the existing supply should be first fully utilised.

Jan. 7th.

Obituary.

JULIA COCK, M.D. BRUX., L.R.C.P. IREL., L.R.C.S. EDIN.,

CONSULTING PHYSICIAN TO THE NEW HOSPITAL FOR WOMEN, AND DEAN OF THE LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE death of Dr. Julia Cock occurred on Feb. 7th after a long illness.

Julia Ann Hornblower Cock was born at Shrewsbury in 1860. Early in life she felt the need of a wider sphere than that of home for developing her powers, and she found her opportunity in 1877, when she joined the group of pioneer women who were opening the medical profession to their sex. She came to London in that year and entered as a student at the London School of Medicine for Women, which had at that time only recently been founded. Here she worked for five years, and obtained various distinctions, including the prize in Medicine. At that date the only registrable qualification open to medical women was that of the Licence of the Royal College of Physicians of Ireland; she obtained this qualification in 1882, and at the same time the Licence of Midwifery from the Rotunda Hospital, Dublin.

Miss Cock then settled in Braintree, where she acted as medical officer to the Braintree and Bocking Cottage Hospital, and at the same time she was resident medical officer at the Sunnyfield Convalescent Home. In 1889, when a qualification in surgery as well as in medicine became necessary in consequence of the change in the law, she became a Licentiate of the Royal College of Surgeons of Edinburgh, and, possessing then a double qualification, in 1890 she passed the examination of the M.D. Brussels with honours.

In 1887 Miss Cock was appointed a member of the out-patient, and in 1892 of the in-patient, staff of the New Hospital for Women. For 23 years the interests of her professional life centred round her work as visiting physician to the hospital. She was an accurate observer, her ardour for scientific research was exceptional, and she was an admirable clinical teacher. Although no medical school was attached to the New Hospital, there was keen competition among the students and young graduates for clerkships in her wards, and her high standard of work and her enthusiasm inspired generations of medical women. She gave them as an ideal the aspiration to record faithfully and possibly to be able to add some small contribution to medical knowledge. The equipment and the development of the pathological department of the New Hospital for Women owed much to Miss Cock.

For 15 years Miss Cock acted as joint lecturer in medicine at the London (Royal Free Hospital) School of Medicine for Women. Her administrative ability was recognised early, and for many years has been of inestimable service in the medical school. For 11 years she held office as dean of the school, and previously she had worked for many years in the capacity of sub-dean in coöperation with Mrs. Garrett Anderson, who was then dean. The welfare of the school was constantly in her mind, and the high place it has taken in recent years is largely due to her wise statesmanship. She devoted herself heart and soul to its interests, and this at a time when the burden of debt arising from the extensive building operations needed all the care possible; and it may be taken as a measure of the success of her administration that when she has been compelled by death to relinquish the arduous duties of the post of dean the medical school is free from debt. Her loss will be severely felt in the carrying out of the difficult tasks of reorganisation rendered necessary by the suggestions of the University of London Commission. One of her chief aims in the administration of the school was to encourage self-government among the students and the spirit of freedom and sense of public duty. She wished the school life to fit the students to take their part later in public and professional life—in other words, to train them in citizenship. There were hardly any rules in the school, but she instituted the offices of students' representative, both in the hospital and the school, by which the students themselves elected one of their body to be in special communication with the dean, and so to take a share in the government of the school. Later, she instituted the students' council, a representative parliament of the students in which all school affairs were fully discussed. For many years she was president of this council. One of the last projects which she had in mind was the reorganisation of the students' union on a wider basis and on more permanent lines. She attached great importance to the training of medical students in order to develop a wider outlook on life. She never sought for or encouraged personal intimacy with the students, but no student who sought her advice failed to find sympathy and understanding. She attached little value to popularity or to professional success except from the scientific point of view.

She held several other medical posts; she was medical examiner for the Board of Education; medical examiner of female proposers for Government Insurance; medical inspector of the North London Collegiate School for Girls and of the Camden School; and she was a past president of the Association of Registered Medical Women. Miss Cock made several contributions to medical

literature; she wrote a memorandum on the medical inspection of secondary schools for girls, published in the Reports of the Royal Commission on Secondary Education. The article on Rheumatoid Arthritis in the Encyclopædia Medica was also from her pen; and amongst many interesting cases published was one case of malignant endocarditis in which the gonococcus was present in the blood and tissues. Her chief clinical work was on the digestive system. She was a pioneer in this country of the medical inspection of schools, of the importance of which she was firmly convinced many years before it was generally accepted.

In private life she was greatly loved and honoured, and her loss is deeply mourned by many personal friends.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF INCIPIENT AND UNCONFIRMED INSANITY.

To the Editor of THE LANCET.

SIR,—It is with great interest I have read Dr. Robert Armstrong-Jones's paper on the Treatment of Incipient Insanity and the discussion that followed, and this morning the perusal of your leading article and the letter from Dr. H. Rayner decided me to place before you the views of one who for 40 years has been treating cases of mental disease in private houses and in an asylum. Some thirty years ago I wrote a book on this very subject, and with his special permission it was dedicated to the man who had the care of the insane so much at heart—the late Lord Shaftesbury, who I may say had every sheet of the book before him, and who made certain corrections therein before he allowed his name to appear on the dedication page.

I have always maintained, and can bring abundant evidence to prove my assertion, that a large number of early cases of insanity have a far greater chance of getting better in properly managed private homes with suitable companionship and with skilled medical supervision than in our large asylums for the insane, wherein individualism is so much lost and where, to a very large extent, patients are herded in large numbers together.

To prove my contention I may point out the fact which Dr. Armstrong-Jones overlooked—that in spite of the far more humane treatment of the insane, in spite of the palatial buildings erected for their reception, and in spite of the large increase in the region of pathological research in our asylums, the regrettable fact exists that the percentage of recoveries in these institutions is less to-day than it was in the decade of 1860–1870. Some few years ago there was a very bitter feeling between those engaged in the treatment of mental disease and the neurologists. The public were beginning to feel that to go to a mental specialist meant but one advice—certification and an asylum—and this they dreaded, and to the neurologist they appealed, and the patients were treated by them in private houses and in homes. Occasionally we heard of disasters, caused in the majority of cases by inadequate supervision, but we did not hear of the many cases that got well without the necessity of certification or asylum treatment. To-day I believe I am right in saying that many of our leading mental consultants are as opposed to immediate certification of patients as were the neurologists of ten years ago.

It is therefore as clear as daylight that the law as it at present exists regarding the treatment of the insane is in many cases evaded, and it may be, as Dr. Armstrong-Jones points out, that many incipient cases are housed in surroundings not suitable, with inadequate supervision, and with no proper safeguards as to proper and kind treatment; but surely Dr. Armstrong-Jones knows there are many medical men and others with experience in this class of case who can be relied upon to do their duty by patients entrusted to their care, and whose work would be greatly lightened and their anxieties much lessened if such an Act as has so long been suggested could be brought into being, and notification of such cases for six months' treatment take the place of the present hated system of certification. This notification would be to the Commissioners in Lunacy, who would have the right of visitation, and no doubt those medical men who were known to have special knowledge and special provision for such treatment would be allowed to take a few such notified cases. I am satisfied that the hatred of certification and the dread of doing an illegal action is at the present day a great cause of early cases not being placed under proper care quickly enough. I firmly believe if such notified cases came into the statistics of the Blue Book of the Commissioners in Lunacy the recovery rate of insanity would soon be greatly increased.

With regard to the poorer classes, it is to my mind incomprehensible that the voluntary boarder clause has not been extended to county and borough asylums. I have long urged this in committees I have sat on and in many discussions in which I have taken part.

I am, Sir, yours faithfully,

LIONEL A. WEATHERLY, M.D.Aberd.

Bournemouth, Feb. 7th, 1914.

MADRAS CITY WATER-SUPPLY.

To the Editor of THE LANCET.

SIR,—In your leading article of Jan. 31st on Major S. P. James's paper *re* "Protection of India from Yellow Fever" you call attention to the evils of intermittency of public water-supplies and domestic storage of water, and class Madras City with ports demanding storage for 24 hours in certain of its limits, "pressure being only put on for a short time daily." The Madras water-supply is a gravitation system, the distribution of which has been extended to excess to meet the needs of a rapidly increasing population. Hence, during the hours of maximum demand, there is a portion of the city at the periphery of the system which obtains a mere dribble. My object in drawing attention to a trivial variation of your account, and your rightly pointing the moral that the authorities of these ports should waken up and remedy mistaken modes of supply, is to state that Madras City is in the act of putting matters right.[1]

I would add that this is not an instance of "The Sanitary Awakening of India" (a period practically limited to 1911–13, according to a recent author), but of what that euphemism means—namely, where

[1] All India Sanitary Conference, Madras, November, 1912. Paper by J. W. Madeley, M.A., M.I.C.E., &c., Special Engineer, Corporation of Madras.

sanitary interests are concerned, the *spasmodic* financial exuberance of the Government of India. I was a member of the "committee of three" which advised on the subject of Madras City water-supply, as far back as 1890. The plan now followed is practically on the lines advised by that committee. The municipal corporation showed no hesitation other than financial at that period in adopting it; in short, they were not "awakening," but were wide awake as to sanitary requirements a quarter of a century back. The difference between 1890 and 1911–13 is that the Government of India have had Revenue "windfalls," with which they have been able at last to answer the repeated requests for financial help by the Madras and other municipalities.

I am, Sir, yours faithfully,

Feb. 9th, 1914. W. G. KING, I.M.S. (ret.).

THE STERILISATION OF MILK AND ALLIED QUESTIONS.

To the Editor of THE LANCET.

SIR,—The interesting correspondence which has lately taken place justifies a restatement of certain axioms which appear to be logical, philosophical, and physiological, and should therefore prove of practical application. They are:—

1. Good milk from clean, healthy cows, milked in a cleanly fashion under all possible cleanly conditions as regards apparatus, storage, place of milking, &c., should always prove a satisfactory substitute for human milk except in a few cases of idiosyncrasy. If kept covered and sufficiently chilled such milk should be usable even in summer. During the winter even less cleanly milk rarely proves harmful.

2. In the summer, or rather in warm weather, milk rapidly deteriorates according to the degree of departure from a clean standard. Even good milk exposed to external contamination by dust and (in incomparably greater proportion) by flies rapidly becomes dangerous in warm weather. The remedy obviously lies in proper cooling, keeping cool, and carefully protecting from flies and dust.

3. Where there is doubt as to the health of the cows or as to the cleanliness of the milk, boiling or pasteurisation of the milk is a safeguard, provided the milk is used the same day. If it has to do duty for several hours special attention must be given to the storage of boiled or pasteurised milk to ensure against contamination by flies, organic emanations (such as are found in living rooms), and dust. Boiled or pasteurised milk is more likely to putrefy than unboiled milk (unless such precautions are taken) because the lactic acid bacilli have been destroyed. These are probably amongst the chief of the vital principles which belong to unboiled milk, and not only act as a police force in keeping down vagrant bacilli, but by clotting and souring milk if it is not kept cool they give a readily detectable warning that all is not right with the milk.

4. I still advocate what was outlined in a paper on the "Waste of Infant Life" in 1905[1], viz., the use of dried sterilised milk during the hot or "fly" months, and of ordinary milk during the remainder of the year (preferably pasteurised under prevailing conditions).

5. In the rearing of infants breast milk (human) is so superior to that of another species of animal, and *a fortiori* to any so-called substitute for milk, that, where possible, no effort should be spared to secure the natural nutriment before resorting to substitutes.

I am, Sir, yours faithfully,

The Shirehouse, Norwich, Feb. 2nd, 1914. J. T. C. NASH.

PS.—The above was written a week ago, but delay in sending it enables me to echo Dr. C. P. Lapage in your issue of Jan. 31st, and to re-echo what I said in 1905 that it is the consumers—the public—who must insist on the milk-supply being produced and dealt with on cleanly lines. Public insistence must eventually prevail.

[1] Journal of the Royal Sanitary Institute.

To the Editor of THE LANCET.

SIR,—In a recent number of THE LANCET Mr. Edmund Owen writes that he hopes you will open your columns to discussion on the subject of sterilised milk, following on the article written in the *Times* on Dec. 29th last by Mr. Robert Mond. I do not know whether the views of those in the trade who are fully qualified to speak on the subject of the preparation and sterilisation of milk are included in Mr. Owen's invitation, but I feel that as Mr. Mond in his article has included condensed milk with sterilised it may convey an erroneous impression generally that condensed milk *is* sterilised. As a matter of fact, condensed full cream sweetened milk is not sterilised; its method of manufacture and the sugar it contains are quite sufficient to conserve the milk without sterilisation, and I claim, after many years' practical experience, that the "living spirit" (whatever that may amount to) of the original milk is not lost. Condensed unsweetened milk relies for its keeping qualities not only on its mechanical preparation, but on its complete sterilisation after the tin is closed, and my own experience in this direction has been that where objection is taken to the fact that it is sterilised this may be fully corrected by a few drops of fresh fruit juice given in conjunction daily.

I do not feel competent to discuss Mr. Mond's statement that tuberculosis cannot be contracted from milk, merely contenting myself by saying that he has a heavy weight of expert opinion against him, including a Royal Commission which took evidence for over two years; but as to the sterilisation of milk I can speak with perfect confidence in saying that if improperly done it is worse than no sterilisation at all.

Unless one has seen it, one can hardly conceive the amount of filth that mechanical cleansing of fresh milk, even if produced under the most cleanly and hygienic conditions, will remove; and apart from dirt, pus, hair, epithelium, and other particles of foreign matter, a simply enormous number of bacteria are thereby taken away from the milk—dragged away from it mechanically with the heavier matter. The resultant cleansed milk is consequently rendered much more favourably disposed to complete victory over the remaining bacteria by sterilisation. Before this latter process is carried through homogenisation of the milk under great pressure breaks up and distributes the particles of cream in such a way that they become indefinitely in suspension, and the milk thus prepared is rendered far more digestible than it is in its natural state.

If any members of the medical faculty, readers of your journal, would like ocular demonstration of the general process that is adopted in the preparation of condensed sweetened full cream milk,

condensed unsweetened full cream milk, or merely sterilised fluid milk, not condensed, I should be happy to receive their names, and I am confident that I can arrange such a demonstration at one of the standard factories, when I feel sure that not only would they be enormously interested, but they could not fail to confirm the views of many others of the medical faculty—viz., that properly cleansed and sterilised fluid milk, and condensed full cream milk, produced under proper hygienic conditions, are infinitely more suitable for human consumption, whether infant or adult, than the ordinary milk in the condition in which it is usually supplied to the consuming public, either urban or suburban.

Apologising for troubling you at such length,

I am, Sir, yours faithfully,

RICHARD W. WOOSNAM, F.I.C., F.C.S.

Analytical Laboratory, Brentwood, Essex.

To the Editor of THE LANCET.

SIR,—I wish to support Dr. Eric Pritchard's view that cooked milk is not harmful to infants. During the last seven years at my infant consultations in North Kensington I have advised the mothers to boil the milk when artificial feeding is necessary, and the "appalling" results which Dr. Ralph Vincent refers to are not, in my opinion, due to the boiling of the milk. If Dr. Vincent will make a careful investigation into each individual case he will find that other causes are at work which produce his "appalling" results. For instance, I find that the quantities of milk which are being given in most cases are not suitable to the digestion of the child, and when I regulate the quantity and write down the instructions on the mother's card, the "appalling" results quickly subside. Another frequent cause is the irregularity in the feeding times, and I may remind Dr. Vincent that equally "appalling" results can be obtained in breast-fed infants if this irregularity is persisted in for any length of time. I find, also, that babies do remarkably well on boiled undiluted citrated milk, provided that small quantities are given. On looking through my notes I find that a large number of these children compare very favourably with even breast-fed infants of the same age. I am confident that it is not so much the food that is at fault, but the manner in which the food is given, and that is why the educational influence of the infant consultation is having such a good effect.

The infant mortality in Kensington during the five years 1901–05 was 144 per 1000 births. In the next period from 1906, when infant consultations were first started, to 1910 the mortality fell to 120 per 1000. In 1912 the rate was still further reduced to 92 per 1000. During all this period the milk-supply in the neighbourhood has remained the same and the mothers have been told to boil the milk.

I feel inclined to attribute these good results in a very poor neighbourhood to the educational effect of the infant consultations.

I am, Sir, yours faithfully,

Kensington, Feb. 3rd, 1914. RONALD CARTER.

RED CELL FRAGILITY IN JAUNDICE.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Feb. 7th Dr. Duncan Whyte, after detailing the results of certain determinations of the red cell fragility in cases of jaundice, remarks: "This suggested that there might be in the serum of jaundiced patients a substance which tended to cause hæmolysis, and that the red cells of such patients having acquired power to resist the lysing action of this hypothetical substance were able also to withstand the tendency to lysis caused by 0·4 and 0·3 per cent. solutions of sodium chloride. Would such an effect be produced by the bile salts that are present in the serum of jaundiced patients?" He then proceeds to give the results of an estimation of the hæmolytic power of solutions of sodium taurocholate of varying strengths.

The hæmolytic action of the bile salts has, of course, long been known, and von Limbeck[1] many years ago tentatively suggested that in obstructive jaundice the bile acids might cause the hæmolysis of the more fragile cells, leaving those of greater resistance. He abandoned this idea, however, on two grounds: (1) that it assumed that the tonicity of the serum sank below the normal isotonic limits when bile acids were present, while he himself found the opposite to be the case; and (2) that it would have involved an oligocythæmia, which did not occur.

In the course of an investigation into certain points in connexion with the phenomena of red cell fragility, the results of which are embodied in a paper recently published in the *Journal of Hygiene*,[2] I studied the action of bile and of certain of its constituents from this point of view in a large number of *in vivo* and *in vitro* experiments. Rabbits were inoculated, intravenously and intraperitoneally, with rabbits' bile, sheep's bile, sodium taurocholate, and cholesterin in varying amounts and over varying periods of time. No diminution in fragility was ever noted. The only alterations which occurred resulted in one or two animals which were subjected to intravenous inoculation of sodium taurocholate solutions of such strength as to cause rapid death. In these cases the blood obtained after death showed an apparent slight increase in fragility, but the intrusion of the post-mortem factor deprives these isolated results of any value.

The *in vitro* experiments consisted in the subjection of red cells, human and rabbits', to the action of varying amounts of sodium taurocholate for different periods of time, both at 37° C. and at room temperature, and the subsequent determination of their fragility. Here also the results were entirely negative.

I am, Sir, yours faithfully,

Wimpole-street, W., Feb. 7th, 1914. W. W. C. TOPLEY.

THE PATHOLOGY OF SYPHILIS.

To the Editor of THE LANCET.

SIR,—The string of conundrums which Mr. E. Halford Ross has addressed to me in your issue of Feb. 7th can hardly be intended seriously, and does not call for extended reply. I do not know whether people still exist who believe that syphilis is due to the Divine wrath on account of the sinful lust of soldiers in the Middle Ages, but should think it not at all unlikely. And I am quite unable to solve the more recondite question whether rabbits also incurred such celestial displeasure. I am singularly ill-informed on theological subjects. I am astonished to hear anyone asking for evidence as to the spread of syphilis after the discovery of the Americas. There is a brief but excellent account in McIntosh and Fildes' useful little book, which I can recommend to

[1] Pathology of the Blood. 1901. London: New Sydenham Society.

[2] The Effect of Certain Drugs, Toxic Substances, and Micro-organisms on the Fragility of the Red Blood Corpuscles of Man and Animals, Journal of Hygiene, vol. xiii., July 2nd, 1913.

the attention of anyone who is ignorant of this most interesting and well-investigated epidemic, or the System of D'Arcy Power and Murphy may be consulted, but the literature is too abundant even to epitomise.

I regret that the word "involution" in the term "involution forms" should have puzzled Mr. Ross, or that he should have consulted a dictionary which told him that the word meant "involved." It is one which is in everyday use amongst bacteriologists to denote a phenomenon with which they are perfectly familiar. Had Mr. Ross consulted Muir and Ritchie's "Bacteriology," or almost any elementary text-book on the subject, he might have learnt what the word means. If any pathologists use the word loosely, to mean something which they do not understand, I leave them to his mercy.

I did not deal with the prevention of syphilis in my article, because it was not an article on the prevention of syphilis. Prevention may be better than cure, but it does not follow that the question of cure may not be worth the attention of medical men who may be called on to treat the disease any day of their lives.

I suspect that the reason why I am submitted to this catechism is my statement that I see no reason for assuming any form other than that of a spirochæte in the life-history of the organism of syphilis. Most pathologists would, I think, have made a very much more definite pronouncement on the subject, but my remark (which was very carefully considered) appears to me not only true but self-evident. To realise this, make a similar series of statements about tubercle. The tubercle bacillus occurs as a bacillus in tuberculous lesions of all sorts and at all stages. It can be cultivated outside the body for many generations, during which (except for a few occasional bodies which are probably involution forms) it remains a bacillus. Therefore, there is no necessity for assuming any other form in its life-history. If Mr. Ross asks "Why?" to this statement I am afraid I can only say that it is a matter of logic. His analogy of malarial crescents is entirely beside the point unless he has cultivated the crescents for many generations outside the body, and has reproduced the disease with the pure cultures.

Lastly, with regard to his statement that the best way to prevent syphilis is to find out the exact truth concerning the parasite which causes it, I must point out that we have a method which is tolerably efficacious in the prevention of small-pox, although our knowledge of the organism which causes that disease is singularly deficient.

I am, Sir, yours faithfully,

Harley-street, W., Feb. 9th, 1914. W. D'ESTE EMERY.

THE TUNING-FORK IN THORACIC DIAGNOSIS.

To the Editor of THE LANCET.

SIR,—I understand that Mr. James Cantlie has been using a tuning-fork as a means of diagnosing enlarged organs, or effusions into the pleura, and the like. Allow me to say that this is not a new idea. I have applied a tuning-fork in exploring the chest for many years, the notion first coming to my mind after reading the late Dr. Stone's lectures before the Royal College of Physicians some time back in the "eighties," if my memory serves.

A tuning-fork is of great assistance in examining the chest, but it is especially advantageous in marking out lung cavities or dilated tubes. Even in these conditions certain physical factors, such as the presence of much fluid or of pus, will lessen the diagnostic aid of the fork. But when a cavity is dry the reverberation of the dominant note is distinctly increased over the cavity, and is diminished as the instrument is carried away from the lesion. Again, in men with hard, almost solid, ribs the sounds are better conducted, as one would expect, than in children and young people with more elastic ribs, which are not such good conductors.

One point I have observed. Different cavities have different dominant notes, and therefore respond varyingly to a fork in G or in C or other note. This I believe is in accordance with the experience of speakers, clergymen and others, who have to address audiences in large halls, churches, or cathedrals. If the voice is pitched to the dominant note of the building the speaker is heard at the periphery, but if he speaks on an unsympathetic note he will only be heard with distinctness at a short distance, even though he should almost shout.

I am, Sir, yours faithfully,

London, Feb. 7th, 1914. SEYMOUR TAYLOR.

A NATIONAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I ventured to make a few remarks in your issue of Jan. 31st on the free choice of doctor because THE LANCET, the *British Medical Journal*, and the *Morning Post* had all laid so great a stress upon it; but surely in discussing the *pros* and *cons* of a State Medical Service there are other and bigger questions beside which "free choice" becomes comparatively insignificant.

No medical man will, I feel sure, deny that there is a great wastage of life through death or permanent disability from preventable or postponable disease, and no one will deny that the physique of the nation is faulty and not what it might be. Further, the birth-rate is declining to a somewhat alarming extent, and consequently the conservation of the health of those who are born is becoming a matter of vital importance to the prosperity of the nation. The question is whether the present method of bringing the public into touch with the medical profession is as good as it could be, or whether by some change the standard of the national health and physique could be raised.

There have been enormous advances in medical knowledge and methods of diagnosis and treatment which have been of great value to individual patients, but so far have done but little to prevent disease and raise the standard of the health of the community as a whole. Rightly or wrongly, it seems to me that these very advances have put the science of medicine beyond the power of individual effort to deal with, and that for the sake of the nation individualism and competition should give way to coöperation. Again, rightly or wrongly, it seems to me that the only way to obtain whole-hearted coöperation within the profession and to extend to the whole nation the advantages of the recent advance in medicine and allied sciences is to establish a whole-time salaried State Medical Service, with prevention of disease as its chief object. It is from this point of view that I would like to see the question of State Medical Service *versus* the present panel system discussed; therefore I shall only answer Dr. Lauriston Shaw's and Dr. Major Greenwood's letters in so far as they raise

the question of the possibility of free choice of doctor under a State service—a question which is thought by many to be of vital importance.

In discussing the possibilities of a free choice of doctors under a State service it must be remembered how limited is the freedom of choice to-day. Poor-law patients, dispensary patients, and hospital patients have practically no choice, and until a year ago club patients had none. In country towns the choice is strictly limited, and in "unopposed" practices there is none. Financial and geographical considerations limit the choice of even better-class patients, whilst amongst the very poor the cheapest doctor is of necessity invariably chosen. Many of these limitations would necessarily continue under any conceivable system of State service. As I have stated elsewhere, I can see no reason why the present system of allotting patients should be discontinued if to-morrow the 20,000 panel doctors became whole-time salaried officers under the State. At first there would be discrepancies with regard to the numbers on each doctor's list, but things would soon adjust themselves to altered circumstances. There would have to be, as there should be now, some limit put upon the work each man was called upon to undertake, which could be done by limiting the number of persons on each list, say, to 3000. When a doctor's list had reached this number other patients choosing him would have to be put upon his waiting list until vacancies occurred, and in the meanwhile go to the doctor of his next choice. After all this is much what happens now. There is a limit to every man's capacity for work, and when that limit is reached would-be patients are either refused or handed over to a partner or assistant. The panel system thus adapted to a whole-time salaried service and open to all would extend "free choice" to many who have not got it now, including the Poor-law patients; and pending the establishment of a fully organised State service it seems to me quite a feasible scheme.

A fully organised State Medical Service, including all branches of the profession, allied sciences, hospitals and other institutions, nursing and dispensing, must necessarily evolve slowly, and it is difficult to forecast the exact form it will ultimately assume. However, I picture in my mind the hospitals greatly increased in number and made the centres of all medical activities. To each hospital will be attached senior, junior, and assistant general practitioners, who will be as integral and essential a part of the hospital staff as any other branch of the profession, and according to my vision will be paid grade for grade equally with physicians, surgeons, and specialists. As members of the staff general practitioners will be able to keep in touch with their patients and themselves do for them many things which they cannot now do in cottages and workmen's dwellings. As members of the staff they will have the advantage of being in daily touch with representatives of all other branches of the profession, which will add greatly to the interest of their work. Each member of the staff of general practitioners will have his definite hours on duty for seeing patients at the hospital, instead of as now at his own private dwelling, and a list of the staff with their hours of attendance will be posted up in the hospital and published weekly in the local papers. All patients who are able to leave their homes will thus be able to come to the hospital and seek the advice of the practitioner of his choice, whilst those who are stricken with serious illness will send or telephone to the hospital and ask the doctor of their choice to visit them. If the chosen doctor on that particular day has already filled up all the available hours of his time on duty the patient will have to be content with one of the assistants or ask the senior of his next choice to take up his case, just as now happens in private practice.

In the smaller towns there must be outposts in the shape of cottage hospitals worked on the same lines as regards "free choice" and linked up with the bigger centres by means of telephone, motor-cars, and motor ambulances. In the rural districts there must be dispensaries, linked up in their turn with the cottage hospitals, at which the local doctors will have their consulting-rooms well equipped with instruments and all modern appliances, and with a nurse or nurses to help them in their work. In such districts as require more than one doctor some choice can be given to patients.

It is some such system as this for which advocates of a State Medical Service are working, and it would give as great a freedom of choice of doctor as there is now, and it would extend that freedom to a larger proportion of the population. But it is probable that as the work of the service became, as it is bound to do, more and more specialised, as each branch of the profession worked more and more in close coöperation with every other branch; and as modern methods of diagnosis and treatment became more and more scientific and exact and available to all, the desire for "free choice" would gradually die a natural death. It is even possible that in the days to come advancing knowledge will throw more light on those diseases now classified as neurotic and point to a better and more scientific way of dealing with them than by "faith in the doctor."—I am, Sir, yours faithfully,

CHARLES A. PARKER.

Upper Wimpole-street, W., Feb. 9th, 1914.

THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—If the definition of language be the art of concealing thought, Mr. Lloyd George is to be congratulated on his statement at the complimentary dinner to Dr. Addison on Friday last that "excluding duplicates in any one Insurance area, but including doctors whose names are put on more than one panel," there are over 20,000 practitioners on the panels. A superficial comparison of the panel list for London with those for the surrounding counties shows immediately that a fallacy of the first magnitude lies concealed in the specious phrase quoted above. On every boundary of every contiguous county or insurance area duplicates are counted, "and there are several," though pains are taken to state that duplicates are not counted within the interior of these same areas. Had this been done, which would have been equally justifiable, Mr. Lloyd George might have had the satisfaction of stating that there are more practitioners on the panels than are contained on the Medical Register.

The correct figure is probably about 14,000, as has been previously stated.

I am, Sir, yours faithfully,

ROBERT CARSWELL,
Honorary Secretary, National Medical Union.

Strand, W.C., Feb. 10th, 1914.

To the Editor of THE LANCET.

SIR,—The *East Anglian Daily Times* is never tired of singing the praises of the Insurance Act, but passes over in silence the many defects of this

extraordinary measure. A very remarkable statement was made at a recent meeting of the East Suffolk Insurance Committee by the vice-chairman, but it was not reported in the *East Anglian Daily Times*. He said: "Had I been a doctor nothing would have induced me to sign the agreement." He referred to the 1914 agreement. Comment is, I think, unnecessary.

I am, Sir, yours faithfully,

T. CUMING ASKIN, M.D. Dub.

Alderton, Woodbridge, Suffolk, Feb. 7th, 1914.

To the Editor of THE LANCET.

SIR,—There is no doubt that the profession is drifting hopelessly with the tide. General practitioners are divided into two hostile camps with no possibility of reconciliation. The Presidents, past and present, of the Royal Colleges give no advice or help. Some other distinguished doctors' names are to be found on the committee of a recent dinner in honour of a man who probably is an important factor in the division. The real cause has been the weakness of half of the medical profession in signing a pledge and then breaking it at the beginning of last year.

These doctors are apparently busy forming societies to support panel practice. They can save themselves the trouble; being Government servants, and badly beaten on their own ground, they are never likely to obtain reforms worth speaking of unless they organise a strike, and even then, after last year's fiasco, no one will heed their threats. The politicians, medical and lay, have won the day, and unless something is done I have no doubt that the insurance doctors will submerge themselves (as they have done in Germany) to the level of underpaid artisans.

It may be asked, Is there any remedy for the present chaotic condition? It is a fact that a certain amount of contract medical service is required in this country; for instance, a labourer with six children earning 30s. a week cannot afford to pay a doctor's bill; for these a Public Medical Service ought to be provided. But it must be organised and run entirely by the medical profession, its discipline especially must be in our own hands, and it must be a severe discipline. Such a service can and ought to be formed. It would be voluntary, and the patients would have free choice of doctors and all the petty annoyances of the Insurance Act would be swept away. No doctor would feel ashamed to belong to it. Politicians would be deleted from its council, and with their removal two-thirds of the trouble of organisation would disappear.

I am, Sir, yours faithfullv,

Streatham, S.W., Feb. 7th, 1914. E. H. WORTH.

A CATALOGUE OF SUFFERING.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent, "M.D. Cantab.," I can assure him that closer attention will be given in future to the manner of setting forth to subscribers the disabilities of candidates for election to that great charity, the Hospital for Incurables, Putney.

No efforts are spared by the board of management to ensure that the disability of a candidate for election is incapable of cure or even of improvement. The list of selected candidates represents a very small proportion of the total number of applications for the benefits of the charity. With further generosity on the part of the public its work could, of course, be considerably extended.

I am, Sir, yours faithfully,

A MEDICAL MEMBER OF THE BOARD OF MANAGEMENT.

Feb. 5th, 1914.

THE NATIONAL INSURANCE ACT.

MEMORANDUM WITH REGARD TO PERSONS MAKING THEIR OWN ARRANGEMENTS UNDER SECTION 15 (3) OF THE NATIONAL INSURANCE ACT.

A MEMORANDUM has been issued by the National Health Insurance Commission in which the Commissioners draw the attention of the Insurance Committees to certain provisions in the current Medical Benefit Regulations as regards persons making their own arrangements, in which those Regulations differ from the Regulations previously in force.

The memorandum in paragraphs 2–6 deals with persons who were allowed to make their own arrangements for medical benefit during the past year, and explains their position when they have not given the proper notice of their desire to change their method of obtaining treatment. Such persons are to be deemed to have applied to obtain treatment in the current year in the same manner as in the preceding year. Insurance Committees will have to review the individual cases, for which purpose a proper form has been provided for issue, and where a committee consider that they must refuse a permission previously granted, the insured person will revert to the ordinary arrangements.

Paragraph 7 of the memorandum explains the position of exempt persons who are required to make their own arrangements. A form has been prepared, which can be issued by Insurance Committees, and which is also applicable to other persons who by the operation of any income limits fixed by the committee are required to make their own arrangements.

The next ten paragraphs deal as follows with—

Persons making their own Arrangements otherwise than with Duly Qualified Medical Practitioners.

8. It is within the knowledge of committees that the old Regulations did not deal under expressly separate provisions with arrangements made with qualified practitioners and those made with other persons. It was, of course, contemplated that the great majority of applications under Section 15 (3) of the National Insurance Act, 1911, would be received from persons desirous of making private arrangements with qualified practitioners; and this expectation has, it is understood, been justified by the experience of committees, who will, in all probability, continue to receive the bulk of their applications from persons desirous of making arrangements of that nature. But the Regulations did not exclude the possibility of arrangements of another class, and it was left to Insurance Committees to consider the particulars of individual applications with a view to giving or withholding consent, in accordance with a proper exercise of their discretion, upon the merits of each case.

9. It is understood, however, that difficulty was experienced last year by committees in some cases in dealing with the applications of persons desirous of arranging otherwise than with qualified practitioners, practically the whole of which have, according to the Commissioners' information, been received from those who wish to obtain treatment from persons known as "herbalists," on grounds of preference based either on a long existing habit, or on some objection to the treatment given by qualified medical practitioners. In the course of their consideration of these cases it is believed that doubts have occurred to Insurance Committees as to whether their discretion was not fettered by the terms of the

Regulations, as appearing to suggest, in the absence of any specific appropriate provision that, failing the satisfaction of the standards applicable to the case of treatment by qualified practitioners, the committee were not empowered to consent to, or contribute to the cost of, arrangements for other kinds of treatment.

10. It is not the case, in the opinion of the Commissioners, that the old Regulations fettered the discretion of Insurance Committees in the manner suggested; and it was open to them, as the Commissioners have advised when consulted, to exercise that discretion upon the merits of each application before them in accordance with their duties to the insured persons concerned. But as confusion seemed likely to arise in the consideration by committees, under one provision of general application, of cases differing so widely in character, and as situations of difficulty would certainly be created by an indiscriminate adoption, in respect of all types of cases, of administrative procedure primarily devised with a view to the circumstances of treatment by qualified practitioners only, the Commissioners have, both for the purpose of removing doubts and for the administrative convenience of committees, amended the Regulations in making them substantive, so as to restate (in Article 44) their practical effect in the form of distinct and separate provisions governing, in the two sets of cases, the conditions to be observed and the circumstances in which a contribution may be made.

11. Before, however, these provisions are dealt with, it should perhaps be pointed out that, though the conditions of the Special Exchequer Grant are no longer specifically referred to in the Regulations as conditions of a contribution by the committee, the position is in no respect modified by this amendment. The conditions in question are still required to be complied with as conditions of the Exchequer Grant to Insurance Committees; and in the event of any breach of these conditions in connexion with treatment privately arranged for under Section 15 (3) of the National Insurance Act, 1911, the committee will be liable to a proportionate diminution of their share of the grant. Moreover, paragraph 4 of Article 44 now expressly provides, in such cases, for a reduction being made in the contribution which would otherwise have been payable under that article to the person, in whose case non-fulfilment of the conditions has occurred, of the amount of the loss occasioned thereby; and as this provision is one of general application, the effect is that in the case of every person making his own arrangements, the committee's contribution is liable to be reduced by the amount payable from the Exchequer in respect of his treatment, unless the conditions of the Exchequer Grant have been fully complied with.

12. Proceeding now to the separate provision governing private arrangement cases with qualified practitioners, it will be observed that the previous position is not materially modified by the new Regulations. The committee are required to satisfy themselves that the private arrangements made "are such as to secure treatment (including drugs and appliances) not inferior in nature, quality, and extent to that provided under the arrangements made by the committee." They will also, of course, secure compliance with the conditions of the Exchequer Grant, as having general application to all cases, in the manner indicated in the preceding paragraph.

13. It should perhaps be pointed out that the Regulations have been slightly amended as to the methods according to which the committee's contributions are to be calculated. It is now possible for the committee to contribute to the cost of arrangements for receiving treatment from a qualified practitioner, made in either of the following ways—namely: (1) As regards both treatment and the supply of drugs, &c., by contract at a fixed rate or rates; (2) as regards treatment alone, by contract at a fixed rate, drugs, &c., being obtained when required, and accounts therefor being presented to the committee; (3) as regards drugs, &c., alone, by contract at a fixed rate, treatment being obtained when required and accounts presented; and (4) both treatment and drugs being obtained when required and accounts presented.

14. With regard to the separate provision (paragraph 2 of Article 44) governing private arrangements for receiving treatment otherwise than from qualified practitioners, it will be seen that it contains no explicit requirements as to the manner in which the committee are to satisfy themselves as to the arrangement made. It will, of course, be obvious that any definite standards established, such as that prescribed in the case of treatment by qualified practitioners (paragraph 1 of Article 44) must be comparative, and must thus fail to apply where the circumstances are not comparable; and it will therefore not be possible for the committee to judge of the satisfactoriness of any arrangements made with unqualified persons by the standards applicable to the panel system.

15. Paragraph 2 of Article 44 accordingly leaves the matter at the discretion of the committee, who "may make such contribution ..... as they think fit." But private arrangements with unqualified persons, like all other private arrangements, are subject to the application of the conditions of the Exchequer Grant. These conditions require, *inter alia*, that the person undertaking treatment should also undertake to provide domiciliary treatment for tuberculosis, in accordance with the Local Government Board Order of July 26th, 1912; and as it is not legally open to any person other than a duly qualified medical practitioner to perform this service, it is clear that no arrangements otherwise than with qualified practitioners could earn the grant to which these conditions attach. The committee will not therefore be able to rely upon receiving any sum from the Exchequer Grant in respect of treatment afforded by unqualified persons; and they would be well advised, in the Commissioners' opinion, to make it clear to any person desirous of being so treated that, in the probable event of a reduction in their share of the grant, the maximum sum available to them for contribution would be limited to the sum (amounting, with the State proportion, to 6s.) which is payable in respect of the applicant by his Approved Society or out of his account in the Deposit Contributors Fund, or from the Exempt Persons Fund, as the case may be.

16. It will be seen that the Regulations only admit of a contribution being made by the committee to the expense of arrangements for treatment by an unqualified person if the insured persons pay at a fixed capitation rate. The difficulty of equating the value of services rendered under widely varying systems, with a view to the adoption of a scale for the calculation of contributions on an attendance basis, would in practice prove almost insuperable.

17. The provisions of the old Regulations, enabling the committee in these cases to reduce or withhold their contribution in the event of their receiving representations from an Approved Society that the treatment is not such as will adequately protect the society's funds, is retained in the Regulations now current.

The Commissioners point out in conclusion that the forms for use by committees in connexion with applications from persons desiring or required to make their own arrangements, will have to be revised, and model revised forms have been prepared. Forms 43/I.C. and 43(*b*)/I.C. will be used in the appropriate circumstances where the arrangements are proposed with duly qualified practitioners. Form 43(*c*)/I.C. will be used in the case of persons required to make their own arrangements either under Section 9 of the National Insurance Act, 1913, or by the operation of any income limit adopted by an Insurance Committee. In view of the "Travellers" arrangements now in operation, it is not thought that committees will require any form similar to the original Form 43 (*a*.)/I.C., but in the event of such a form being necessary advice will be given by the Commissioners. Similarly, on application, advice will be given to Insurance Committees requiring forms to meet the case of insured persons, who desire to make their own arrangements with an unqualified person.

THE INSURANCE AND LOCAL MEDICAL COMMITTEES FOR KENT.

THE newly elected Local Medical Committee and Panel Committee for Kent are trying to arrive at their own solution of the administrative conditions imposed upon them by the National Insurance Act.

The different methods of election of the two committees enforced by the Commissioners' Regulations resulted in the election of two bodies almost but not quite identical in personality. The two committees elected the same chairman, vice-chairman, and medical secretary—namely, Mr. A. Maude, Dr. G. R. F. Stilwell, and Mr. George Potts—who have all for more than a year filled these respective offices on the Kent Local Medical Committee. The Local Medical and Panel Committee then agreed to form a joint committee, sitting at the same time, except for such purposes as are specifically referred to either committee by the Regulations of the Commissioners. A further new departure is the appointment of a firm of accountants as secretarial staff to the double committee. The finances of the committees will be provided by a voluntary levy from panel practitioners of 1*d.* per annum for each insured person on the panel lists, and a voluntary subscription from non-panel practitioners. The levy has been accepted by the panel practitioners in the county, and the Kent Insurance Committee have already handed over the first quarter's deduction.

THE WEST RIDING INSURANCE COMMITTEE.

The subcommittee which inquired into the statements made by Mr. Handel Booth, M.P., that medical men at Cowling, near Keighley, had sent in accounts and charged extra fees to their panel patients, has reported with regard to the four medical men in practice there that against one no complaint was made, and that another was only found to have attended and made a charge for so doing in the case of an insured patient whom he had refused to accept on his list as such. Another asked for and received 2*s.* 6*d.* for medicine, and had accepted payment for medicine and treatment in two cases amounting to 14*s.* 6*d.* and £1 11*s.* 6*d.* He had also sent in an account for payment to a patient whom he had attended after refusing to have him on his list, and had made an arrangement with patients in a particular district whereby they were to pay him fees, but were at the same time to be credited with insurance fees paid on their behalf. In the case of the fourth practitioner one complaint that he had made charges was found not to be substantiated. He had delivered a bill to one insured patient, but this was apparently done under a misapprehension. From another he had accepted payment. As regards another, he had only signed his ticket upon his agreeing to pay additional charges.

THE MANCHESTER INSURANCE COMMITTEE.

At a meeting of the Manchester Insurance Committee attacks were made upon the medical men upon the panel in that city. Mr. Jones, chairman of the finance subcommittee, appears to have been particularly vigorous in his onslaught. This gentleman now stands committed to the proof of allegations made by him of neglect and of inability to deal with the number of patients undertaken, for he has given notice that he will move at the next meeting of the committee that the medical subcommittee be recommended to investigate and report as to the desirability of establishing a full-time medical service for the insured. A Mr. Smith, who supported the views of Mr. Jones, complained that the medical men were "jerrying their work," and pointed to the sums drawn by many of them, apparently in support of the contention that they had too many patients. Other matters discussed by the committee included the steps to be taken for cutting down the expenditure upon drugs and appliances. In this connexion the committee declined to approve of the exclusion of malt and cod-liver oil as dietetic articles from the "drugs" to be prescribed where in the opinion of the medical practitioner they were necessary to the adequate treatment of his patient.

SANATORIUM BENEFIT IN BRISTOL DURING 1913.

A report issued by the Bristol Insurance Committee shows that during the past year 488 patients, 14 of whom were dependents, were treated for tuberculosis; 286 were men and 202 women. Of these, 211 received sanatorium treatment, 147 were treated at the dispensary, and 130 received domiciliary treatment. Of the sanatorium cases, 70 had been discharged fit for work, and 41 still remained under treatment, the remainder being in various degrees of invalidism. Patients discharged from the sanatorium are referred to the tuberculosis officer at the dispensary. Dr. J. Michell Clarke, commenting on these figures, spoke of the need for caution in accepting the term "cure" until a term of years had passed and tested its validity; he also emphasised the need of after-care in the management of the tuberculous patient after discharge from the sanatorium.

APPROVED SANATORIA.

A list of the sanatoria approved by the Local Government Board under the National Insurance Act, with the names of the administrative counties and county boroughs in which they are situate and the date on which the approval expires in each case, has been issued from the Local Government Board for official use. It may be obtained, price 1*d.*, through any bookseller or from Messrs. Wyman and Sons, Limited, Fetter-lane, London, E.C.

Pressure of space has obliged us to delay publication this week of the further instalment of our Special Commissioner's description of the resistance in London to the working of the National Insurance Act.

MEDICAL INSPECTION OF REFORMATORY SCHOOLS.—The Home Secretary has appointed Mr. Arthur Herbert Norris, tuberculosis medical officer to the Berkshire county council, to be medical officer of reformatory and industrial schools, the appointment to take effect on April 1st next.

QUEEN ALEXANDRA SANATORIUM, DAVOS-PLATZ.—The annual meeting at Davos of the Queen Alexandra Sanatorium was held at the British Consulate on Feb. 3rd. Among those present were Dr. Bernard Hudson, H.M. Consul at Davos, and chairman of the local board of management of the sanatorium; Mr. E. C. Simmons, member of the council of the sanatorium in London; and Dr. H. H. Carleton, medical superintendent. Dr. Hudson presided in the absence of the President, Lord Balfour of Burleigh. He was glad to be able to report that the sanatorium had during the past year done very satisfactorily the excellent work for which it was built. For the first time the year (ending March 31st last) showed a profit, so that their self-supporting ideal had at last been attained. This was owing to the increased number of patients they had had, not only in the winter, but also in the summer. He was also glad to be able to report that the new patients' rooms were all finished, bringing the number up to 80, and also the new medical rooms, which were extremely good. Dr. Hudson further reported that the memorial tablet to his predecessor, Dr. William H. Huggard, had now been erected in the institution. A successful meeting closed with a vote of thanks to the chairman, proposed by the British chaplain, the Rev. F. L. Bedwell.

Medical News.

VICTORIA UNIVERSITY, MANCHESTER.—The following awards have recently been made:—

Practical Anatomy Medal.—F. C. Ormerod and (prox. acces.) Nesta Perry.
Senior Anatomy Medal.—J. A. Panton.
Tom Jones Exhibition in Anatomy (and Junior Medal).—F. H. Anderson and *Norman Kletz and *Francis White (equal).
* Resigned in favour of F. H. Anderson, to whom the award has been made.

UNIVERSITY OF BRISTOL.—At the Second Examination for the Degrees of M.B., Ch.B. (Part I.), held recently, the following were successful:—

Edwin Jennings Ball, Daniel Gingell Cossham, Eva Richmond, and Evelyn Bessie Salter.

A series of three lectures on the Application of Advanced Physiology to Medicine began last week at the University of Bristol. Professor A. F. Stanley Kent gave a most interesting account of his own recent work, which seems to have disclosed new connexions between auricle and ventricle. He also described the evolution of electrocardiography, with the aid of many lantern slides, and demonstrated the Bock-Thoma oscillograph and the Einthoven string galvanometer. A few electrocardiograms from patients were also shown and explained. An encouraging feature was the large attendance of medical men.

TRINITY COLLEGE, DUBLIN.—The following have passed Part I. of the examination held in January for the Diploma in Public Health of Dublin University:—

Evelyn Morris Franklin, L.R.C.P. & S. Edin.; Dorothy Kate Milne, M.D. Dub.; Peter Henry Lemass, M.B. Dub.; George Edward Palmer, M.R.C.S. Eng., L.R.C.P. Lond.; and Robert Henry Cummins Lyons, M.B. Dub.

FOREIGN UNIVERSITY INTELLIGENCE.—*Algiers:* Dr. Dafour, professeur *agrégé* of the Nancy School of Medicine, has been appointed to the chair of Medical Physics in succession to Dr. Guillemin.—*Amsterdam:* Dr. A. Schüffner, the eminent pathologist of tropical diseases, has been granted the degree of Hon. Doctor.—*Berlin:* Professor Finkelstein has been elected an Honorary Member by the Argentine Pædiatric Society.—*Cologne (Academy of Practical Medicine):* Dr. Ernst Stuertz, *dozent* of medicine and directing physician of the Augusta Hospital, has been granted the title of Professor.—*Freiburg:* Dr. Paul von Szily, *privat-docent* of ophthalmology, has been promoted to an Extraordinary Professorship.—*Greifswald:* Dr. W. Forkastner, *privat-docent* of psychiatry, has been granted the title of Professor.—*Kiel:* Dr. Baum, oberarzt of the surgical clinic of the University, has been appointed Director of the Deaconess Hospital in Flensburg.—*Lübeck:* Dr. Richard Karutz, the laryngologist, has been granted the title of Professor.—*Marburg:* Dr. Max Döllner has been recognised as *privat-docent* of Forensic Medicine.—*Pavia:* Professor Camillo Golgi has been elected Ritter of the Friedensklasse of the Prussian Order *pour le mérite* for his researches on pathological histology.

DONATIONS AND BEQUESTS.—Bequests under the will of the late Mrs. Sarah Campbell include £100 to Dr. Barnardo's Homes and £1000 each to the Cancer Hospital, Brompton, the Brompton Hospital for Diseases of the Chest, West London Hospital, and the London Hospital; £500 each to the Royal Hospital for Incurables, Middlesex Hospital, and Sir William Treloar's Cripple Fund, the bequests to the hospitals to be for the endowment of "Sarah Campbell" beds.—The late Louisa Mary Lady Knightley of Fawsley has left £1000 to Northampton Hospital for the endowment of a "Rainald Knightley" bed in memory of her husband, Lord Knightley.—By the will of Mr. Carew Davies Gilbert, of Trelissick, Truro, the Royal Cornwall Infirmary, Princess Alice Hospital, Eastbourne, and King Edward's Hospital Fund will receive £500 each.—Alderman Holt, of Manchester, has offered to give £2000 to Manchester hospitals for the purchase of radium for the treatment of cancer.—Mr. F. Williams, of Budleigh Salterton, has given £500 to the Budleigh Salterton Cottage Hospital for erecting an operation-room as a memorial to his late wife.—By the will of the late Miss Easton, of Felling, Durham, the testatrix bequeathed £10,000 to the College of Medicine of the University of Durham, Newcastle-upon-Tyne, and £5000 to Armstrong College.

Sir Shirley F. Murphy has been appointed a member of the Trade Board for dealing with shirt-making trades under the Trade Boards Act.

GALTON ANNIVERSARY LECTURE.—The first Galton lecture, under the auspices of the Eugenics Education Society, will be delivered on Monday next, Feb. 16th, at 8.30 P.M., at the Hotel Cecil, Strand, W.C. The lecturer is Sir Francis Darwin, F.R.S., who will take as his subject "Francis Galton."

ROYAL MEDICAL BENEVOLENT FUND.—At the January meeting of the committee 14 cases were considered and grants amounting to £138 made to 12 of the applicants. Appended is an abstract of the cases relieved:—

Daughter, aged 47, of late M.D., L.R.C.P. Lond. who practised in Wimpole-street. Income £19 a year, and has lost a home through the recent death of a friend whom she nursed for a couple of years. Is temporarily quite broken down in health. Voted £15.—Widow, aged 63, of L.S.A. No income, and is in bad health; endeavours to support herself by needlework and occasional nursing. Relieved three times, £22. Voted £12.—Widow, aged 76, of L.R.C.P. Edin. who practised in Warwickshire. Since husband's death several years ago has supported herself by letting lodgings, but finds it increasingly difficult to do so. Children unable to help. Relieved twice, £24. Voted £12.—Daughter, aged 59, of late M.R.C.S. who practised in Somersetshire. No income and chronic ill-health, which makes regular employment impossible; precarious earnings from needlework. Relieved three times, £36. Voted £12.—Widow, aged 66, of M.R.C.S. who practised in Kent. No income, no children. Endeavours to maintain herself by taking boarders. Relieved three times, £18. Voted £12.—Widow, aged 63, of L.S.A. who practised in London. No income, and has been incapacitated for several weeks by severe illness; slight help from a sister-in-law. Relieved once. Voted £12.—Widow, aged 68, of L.R.C.P. Lond. Is practically destitute, and has no children or friends who can help. Relieved four times, £48. Voted £12.—Widow, aged 43, of M.D. R.U.I. who practised in county Durham. Lets rooms to supplement an allowance of £25 yearly for the benefit of only child, aged five. Health indifferent. Relieved three times, £25. Voted £5.—Daughter, aged 61, of late M.R.C.S. who practised in London. Supported herself for 35 years as a governess or school matron, and exhausted her small savings by helping a brother in bad health. Only income a small pension from a charitable society. Relieved seven times, £31. Voted £12.—Widow, aged 53, of M.B., C.M. Edin. who practised in Perthshire. Has an income of £20 a year and takes boarders; seven children, of whom two are partially dependent and none able to help. Relieved 14 times, £162. Voted £12.—Daughter, aged 38, of late M.R.C.S. who practised in Yorkshire. Used to be a nurse, but was obliged to give up her work on account of ill-health, which necessitated three or four serious operations; now endeavours to maintain herself by needlework and making marmalade. Relieved nine times, £85. Voted £12.—Daughter, aged 64, of late M.R.C.S. who practised in Devonshire. Has £10 a year, and lives with a sister whose only income is an annuity from this fund. Relieved once, £12. Voted £12.

Contributions may be sent to the honorary treasurer, Dr. Samuel West, 11, Chandos-street, Cavendish-square, London, W.

THE SIXTH INTERNATIONAL DENTAL CONGRESS, 1914.—This Congress, as we have already announced, will be held in London, under the patronage of the King, from August 3rd to 8th. The British Government have issued invitations to foreign Goverments and to our self-governing dominions to send official representatives, and dental societies and organisations throughout the world will be represented. National committees are already at work in America, France, Germany, and other countries. The following officers of the Congress have been appointed:—President: Mr. J. Howard Mummery. Vice-Presidents: Mr. W. B. Paterson, Mr. L. Matheson, Mr. W. Guy, Dr. A. W. W. Baker, and the President of the British Dental Association. President of the committee of organisation: Mr. W. B. Paterson. Honorary treasurer: Mr. H. Baldwin. Honorary general secretaries: Dr. Norman G. Bennett and Mr. H. R. F. Brooks. The ten sections into which the Congress will be divided, with the name of the presidents, are as follows: Dental Anatomy, Histology, and Physiology, Mr. A. S. Underwood; Dental Pathology and Bacteriology, Mr. A. Hopewell-Smith; Dental Surgery and Therapeutics, Mr. W. H. Dolamore; Dental Physics, Chemistry, Radiography, and Metallurgy, Mr. Montagu F. Hopson; Dental Prosthesis, Mr. W. Simms; Orthodontics, Mr. J. H. Badcock; Oral Surgery and Surgical Prosthesis, Mr. J. G. Turner; General and Local Anæsthesia, Mr. W. Guy; Oral Hygiene, Public Instruction, and Public Dental Services, Dr. Norman G. Bennett; Dental Education, Mr. W. H. Gilmour. A demonstration committee is being organised with Mr. T. A. Coysh as chairman and Mr. W. F. Mellersh as honorary secretary. The subscription for members of the

Congress will be 30s., and for members of their families accompanying them 15s. Messrs. T. Cook and Son, of Ludgate-circus, London, E.C., have been appointed official hotel and travel agents. A museum, the scope of which has already been outlined in these columns, is being arranged by a committee of which Mr. Hopewell-Smith is chairman and Mr. F. N. Doubleday is honorary general secretary. Intending exhibitors should apply to the offices of the Congress, 19, Hanover-square, London, W.

UNIVERSITY OF LIVERPOOL.—Dr. Warrington Yorke, director of the Runcorn Research Laboratory in the Liverpool School of Tropical Medicine, has been appointed Walter Myers Professor of Parasitology in the University of Liverpool.

THE late Mr. J. H. Targett, F.R.C.S., obstetric surgeon to Guy's Hospital, who died on May 26th last, has left by his will a sum which will bring in approximately £300 per annum towards the upkeep of the new Pathological Department of Guy's Hospital.

CENTENARIANS.—Miss Ritso, of Bath, celebrated the 102nd anniversary of her birthday on Jan. 26th.—Mrs. Ann Peters, who celebrated the 100th anniversary of her birthday on Dec. 29th last, has died at Great Bookham, Surrey.

DEVON AND CORNWALL EAR AND THROAT HOSPITAL, PLYMOUTH.—At the annual meeting of the Devon and Cornwall Ear and Throat Hospital the committee accepted with much regret the resignation of Mr. George Jackson, who has been honorary surgeon to the charity since the foundation of the hospital 27 years ago, and he was unanimously appointed honorary consulting surgeon.

ROYAL UNITED HOSPITAL, BATH.—The annual meeting of the subscribers of the Royal United Hospital, Bath, was recently held under the presidency of the mayor (Dr. Preston King). The medical report was satisfactory. The financial statement showed that the total income was £5289 and the total expenditure £7818, showing a deficit balance of £2529. The committee make a strong appeal for increased financial support.

PRESENTATION TO A MEDICAL MAN.—On Feb. 4th a presentation of a pianola was made to Mr. George Potts, of Maidstone, on behalf of the medical practitioners of Kent, by Mr. Arthur Maude, chairman of the Kent Medical Committee, in recognition of the valuable services which Mr. Potts has rendered during the last two and a half years as honorary secretary of the Kent Medical Committee.

CHILD STUDY SOCIETY, LONDON.—This society has arranged the following programme of lectures and discussions for the present session, on Thursday evenings at 7.30 o'clock, at 90, Buckingham Palace-road, S.W. On Feb. 19th Mr. E. W. Scripture, of New York, will lecture on Speech Defects in Children and their Treatment; on March 5th Miss C. C. Graveson will lecture on the Sense of Humour in Children; on March 19th Professor J. J. Findlay will lecture on the Dramatic Impulse in Children; and on April 2nd Dr. Leonard Guthrie will lecture on the Nervous Child. On April 23rd there will be a joint meeting with the Charity Organisation Society, when the Rev. J. C. Pringle will open a discussion on Raising the Standard of Child Upbringing. On May 7th there will be a joint meeting with the Parents' National Education Union for a discussion on Education in Early Childhood before School Age.

"JUBILEE" CONGRESS OF THE GERMAN ROENTGEN SOCIETY.—This society will celebrate the tenth year of its existence by an extended congress and comprehensive exhibition to be held in Berlin from April 19th to 21st next. The particular time has been chosen so that visitors to Berlin for the Orthopædic and Surgical Congresses may have an opportunity to attend. A paper will be read by Dr. Krause, of Bonn, upon the Biological Effects of the Roentgen Rays upon Animal and Human Tissues. Particulars of other papers and demonstrations which it is proposed to offer must be sent to the secretary, Dr. Immelmann, Lützowstrasse, 72, Berlin, W. 35, at the latest before March 15th. Members are reminded that tickets of membership can be obtained (subscription M.10) up to April 1st from Herr Melzer, Ziegelstrasse, 10–11, Berlin, N. 24. The sessions and exhibition will take place in the Landes-Ausstellungspark, Berlin, N.W., at the Lehrte railway station (entrance in the Alt Moabit-street 4–10). The president for the year is Dr. Max Levy-Dorn. The first session takes place on Sunday, April 19th, at 10 A.M.

LONDON HOSPITAL.—The Worshipful Company of Grocers have made an offer to the Governors of the London Hospital of a sum not exceeding £10,000 for the provision of accommodation for the treatment of patients suffering from syphilis.

BOOKS, ETC., RECEIVED.

AMERICAN CLIMATOLOGICAL ASSOCIATION, Philadelphia. (Secretary: Dr. Guy Hinsdale, Hot Springs, Virginia, U.S.A.)

Transactions of the American Climatological Association for the Year 1913. Volume XXIX. Price not stated.

AMERICAN LARYNGOLOGICAL ASSOCIATION, New York. (Secretary: Dr. Harmon Smith, 44, West 49th Street, New York City.)

Transactions of the Thirty-fifth Annual Meeting of the American Laryngological Association held at Washington, D.C., May 5th, 6th, and 7th, 1913. Price not stated.

ARNOLD, EDWARD, London.

Diseases of the Heart. By John Cowan, D.Sc., M.D., F.R.F.P.S., Professor of Medicine, Anderson's College Medical School, Glasgow. With Chapters on the Electro-Cardiograph by W. T. Ritchie, M.D., F.R.C.P., and the Ocular Manifestations in Arterio-sclerosis by Arthur J. Ballantyne, M.D., F.R.F.P.S. Price 15s. net.

Physical Chemistry, its Bearing on Biology and Medicine. By James C. Philip, M.A., Ph.D., D.Sc., Assistant Professor in the Department of Chemistry, Imperial College of Science and Technology, London. Price 7s. 6d. net.

BADGER, RICHARD G., The Gorham Press, Boston.

Psychopathology of Hysteria. By Charles D. Fox, M.D. Price $2 net.

BAILLIÈRE, TINDALL, AND COX, London.

The Pocket Anatomy. Seventh edition, revised and edited by C. H. Fagge, M.B., M.S. Lond., F.R.C.S. Thirty-seventh Thousand. Price 3s. 6d. net.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

Scrofuloids. By Prof. Dr. G. Cornet, Berlin and Riechenhall. Translated from the Second German Edition by J. E. Bullock, M.D., Assistant Medical Officer, The Eversfield Chest Hospital, St. Leonards-on-Sea. Price 15s. net.

BLACKWOOD, WILLIAM, AND SONS, Edinburgh and London.

Practical Nursing. By the late Isla Stewart, Matron of St. Bartholomew's Hospital, London, and Herbert E. Cuff, M.D., F.R.C.S., Principal Medical Officer to the Metropolitan Asylums Board, London. Fourth edition, thoroughly revised and enlarged by H. E. Cuff, assisted by W. T. Gordon Pugh, M.D., B.S., Medical Superintendent, Queen Mary's Hospital for Children, Carshalton, Surrey. Price 5s. net.

BUTTERWORTH AND CO., Bell-yard, Temple Bar, London, and at Winnipeg, Sydney, and Calcutta.

Butterworth's Workmen's Compensation Cases. Vol. IV. (New Series.) October, 1912, to October, 1913. Edited by His Honour Judge Ruegg, K.C., and Douglas Knocker, Esq., of the Middle Temple and South-Eastern Circuit, Barrister-at-Law, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Lond. Price 7s. 6d. net.

CASSELL AND CO., LIMITED, London, New York, Toronto, and Melbourne.

Surgical Diseases and Injuries of the Genito-Urinary Organs. By J. W. Thomson Walker, M.B., C.M. Ed., F.R.C.S. Eng. Price 25s. net.

CHURCHILL, J. AND A., London.

Allen's Commercial Organic Analysis. Volume VIII. Enzymes, Proteins and Albuminoid Substances, Milk and Milk Products, Meat and Meat Products, Hæmoglobin and Blood, Proteoids, Fibroids. Fourth edition. Entirely rewritten. Edited by W. A. Davis, B.Sc., A.C.G.I., and Samuel S. Sadtler, S.B. Price 21s. net.

CONSTABLE AND CO., LIMITED, London.

Lessons in Elementary Tropical Hygiene. For the Use of Pupils in Tropical Schools. By Henry Strachan, C.M.G., L.R.C.P. Lond., M.R.C.S. Eng., F.L.S., F.Z.S., F.R.A.I. Price 1s. net.

DORNAN, WILLIAM J., Philadelphia.

Transactions of the American Surgical Association. Volume the Thirty-first. Edited by Archibald Maclaren, M.D., Recorder of the Association. Price not stated.

FROWDE, HENRY, AND HODDER AND STOUGHTON, Edinburgh, Glasgow, and London.

Defective Ocular Movements and their Diagnosis. By E. and M. Landolt, Paris. Translated by Alfred Roemmele, M.B., Ch.B., and Elmore W. Brewerton, F.R.C.S. Price 6s. net.

Cunningham's Manual of Practical Anatomy. Revised and edited by Arthur Robinson, Professor of Anatomy in the University of Edinburgh. Sixth edition. Volume First: Superior Extremity; Inferior Extremity; Abdomen. Price 10s. 6d. net.

HIGGINBOTHAMS, LIMITED, Madras and Bangalore.

Hygiene and Diseases of India. A Popular Handbook. By Lieut.-Col. Patrick Hehir, I.M.S., M.D., F.R.C.P., F.R.C.S. and F.R.S.E., D.P.H. Camb., D.T.M. Liv. Univ. Third edition. Revised and illustrated. Price, Rs. 6.8, or 8s. 8d.

LEWIS, H. K., London.

The Sanitary Inspector's Handbook. By Albert Taylor, Sanitary Inspector, City of Westminster. Fifth edition. Price 6s. net.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

International Clinics. A Quarterly. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U.S.A., with Collaboration. Volume IV. Twenty-third Series, 1913. Price not stated.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Controlled Natural Selection and Value Marking. By J. C. Mottram, M.B. Lond. Price 3s. 6d. net.

Introduction to Modern Inorganic Chemistry. By J. W. Mellor, D.Sc. Price 4s. 6d.

PANINI OFFICE, BHUVANESHVARI ASHRAM, Bahadurganj, Allahabad, India.

The Dietetic Treatment of Diabetes. By B. D. Basu, Major, I.M.S. (retd.). Fourth edition, revised and enlarged. Price Rs. 1.8.

PRESBYTERIAN BOOK STORE, Federal-street and Duquesne Way, Pittsburgh, Pa.

The Tonsils and the Voice in Science, Surgery, Speech, and Song. By Richard B. Faulkner, M.D., Columbia University. Price, $2 net.

REBMAN COMPANY, 141-145, West 36th Street, New York.

Research Studies in Psoriasis. By Jay F. Schamberg, M.D., Director of the Research; John A. Kolmer, M.D., Pathologist and Bacteriologist; A. I. Ringer, M.D., and G. W. Raiziss, Ph.D., Physiological Chemists. (Reprinted from the Journal of Cutaneous Diseases, including Syphilis, for October and November, 1913.) Price not stated.

ROUTLEDGE, GEORGE, AND SONS, LIMITED, London.

Handbook of Photomicrography. By H. Lloyd Hind, B.Sc., F.I.C., and W. Brough Randles, B.Sc., Lecturer in Biology, Derby Technical College. Price 7s. 6d. net.

SCIENCE PRESS, THE, New York and Garrison, N.Y.

Medical Research and Education. By Richard M. Pearce, William H. Welch, W. H. Howell, Franklin P. Mall, Lewellys F. Barker, Charles S. Minot, W. B. Cannon, W. T. Councilman, Theobold Smith, G. N. Stewart, C. M. Jackson, E. P. Lyon, James B. Herrick, John M. Dodson, C. R. Bardeen, W. Ophüls, S. J. Meltzer, James Ewing, W. W. Keen, Henry H. Donaldson, the late C. A. Herter, the late Henry P. Bowditch. Price not stated.

SHAW AND SONS, 7 and 8, Fetter-lane, London, E.C.

Clinical Disorders of the Heart Beat. A Handbook for Practitioners and Students. By Thomas Lewis, M.D., D.Sc., F.R.C.P. Price not stated.

STEVENS AND SONS, LIMITED, 119-120, Chancery-lane, London.

Medical Jurisprudence from the Judicial Standpoint. By W. Ramsay Smith, M.D., C.M., D.Sc., F.R.S. Edin. Price 12s. 6d.

TREAT, E. B., AND COMPANY, New York.

Diseases and Deformities of the Foot. By John Joseph Nutt, B.L., M.D., Surgeon-in-Chief, New York State Hospital for the Care of Crippled and Deformed Children. Price $2.75.

UNIVERSITY OF CHICAGO PRESS, Chicago, Illinois. CAMBRIDGE UNIVERSITY PRESS, Fetter-lane, London.

Artificial Parthenogenesis and Fertilization. By Jacques Loeb, Member of the Rockefeller Institute for Medical Research. Originally translated from the German by W. O. Redman King, B.A., Assistant Lecturer in Zoology at the University of Leeds, England. Supplemented and revised by the Author. Price 10s. net.

UNIVERSITY PRESS, Cambridge. CAMBRIDGE UNIVERSITY PRESS, Fetter-lane, London.

Genera of British Plants. Arranged according to Engler's Syllabus der Pflanzenfamilien (Seventh edition, 1912). With the Addition of the Characters of the Genera. By Humphrey G. Carter, M.B., Ch.B. Price 4s. net.

UNIVERSITY TUTORIAL PRESS, LIMITED, High-street, New Oxford-street, London, W.C.

First Stage Hygiene. By Robert A. Lyster, M.D., Ch.B., B.Sc. Lond., D.P.H. Twelfth Impression (Sixth edition), revised and enlarged. Price 2s. 6d.

WHITAKER, J., AND SONS, LIMITED, London.

The International Whitaker. 1914. Cash price in the United Kingdom, 2s.

WOODALL, MINSHALL, THOMAS AND CO., Oswestry.

Prifysgol Cymru. The Calendar of the University of Wales for the Academic Year 1913-1914. Price not stated.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London. MACMILLAN COMPANY OF CANADA, LIMITED, Toronto.

A Synopsis of Surgery. By Ernest W. Hey Groves, M.S., M.D., B.Sc. Lond., F.R.C.S. Eng., Surgeon to the Bristol General Hospital. Price 9s. 6d. net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Explanatory Lectures for Nurses and their Teachers. By H. Hawkins-Dempster. Price 3s. 6d. net.

WRIGHT AND POTTER PRINTING CO. 32, Dearne-street, Boston, U.S.A.

Forty-fourth Annual Report of the State Board of Health of Massachusetts for 1912. Price not stated.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALDRIDGE, FREDERICK JAMES, M.B., B.C. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health of Glastonbury (Somerset).

BIDEN, W. M., M.B., B.Ch. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Ketton District of the county of Rutland.

BOURKE, C. J., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Bellananagh District of the county of Cavan.

CARSWELL, JOHN, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a Medical Commissioner in Lunacy for Scotland.

FRASER, KATE, M.D. Glasg., has been appointed a Deputy Commissioner of the General Board of Lunacy for Scotland.

FULLER, H. WARDLAW, L.D.S. Eng., has been appointed Dental Surgeon to the Poplar Schools at Shenfield, Essex.

JACKSON, GEORGE, F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., J.P., has been appointed Honorary Consulting Surgeon to the Devon and Cornwall Ear and Throat Hospital, Plymouth.

JOSCELYNE, FREDERIC PERCY, M.D. Brux., L.S.A., D.P.H. Oxon., has been appointed Temporary Medical Officer of Health for the Taunton Rural District.

LEGAT, ROBERT EDDOWES, M.B., C.M. Edin., has been appointed District Medical Officer by the Warmley (Gloucestershire) Board of Guardians.

LITTLE, FRANCIS ERNEST, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Teignmouth (Devon) Hospital.

MAXTED, G., M.D., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Norfolk and Norwich Eye Infirmary.

NORRIS, A. H., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed by the Home Secretary a Medical Inspector of Reformatory and Industrial Schools.

PALMER, F. W. MORTON, M.D., B.C. Cantab., has been appointed Honorary Medical Officer to the Teignmouth (Devon) Hospital.

PATTERSON, ROBERT LLOYD, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Honorary Medical Officer to the Teignmouth (Devon) Hospital.

PIGGOTT, FREDERICK CECIL HOLMAN, M.D., B.C. Cantab., M.R.C.S., L.S.A., has been appointed Honorary Consulting Surgeon to the Teignmouth (Devon) Hospital.

ROBB, A. LAWRENCE, M.B., Ch.B. Aberd., has been appointed Assistant School Medical Officer to the County Council of East Sussex.

STURROCK, JAMES P., M.D. Edin., has been appointed a Deputy Commissioner of the General Board of Lunacy for Scotland.

TITTERTON, JOHN TARRATT, M.B., C.M. Edin., has been appointed Medical Officer of Health of Saltash (Cornwall).

WALSH, J. F., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Slievereagh District of the county of Cork.

WILKINSON, KENNETH B., M.D., Ch.B. Birm., has been appointed Pathologist to the Birmingham and Midland Free Hospital for Sick Children.

YORKE, WARRINGTON, M.D. Liverp., has been appointed to the Walter Myers Chair of Parasitology in the University of Liverpool.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Vauxhall Bridge-road, S.W.—House Surgeon. Salary £40 per annum. Also Clinical Assistants.

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £120 per annum, with board and residence.

BERKSHIRE COUNTY COUNCIL.—Tuberculosis Officer. Salary £500 per annum.

BETHNAL GREEN INFIRMARY AND WORKHOUSE, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £120 per annum, with apartments, board, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £100 per annum, with board and laundry.

BIRMINGHAM CITY EDUCATION COMMITTEE.—Anæsthetist for Dental Treatment of School Children. Salary at rate of £100 per annum.

BLACKBURN COUNTY BOROUGH EDUCATION COMMITTEE.—School Medical Inspector and Assistant to Medical Officer of Health. Salary £250 per annum.

BLACKBURN UNION WORKHOUSE AND COTTAGE HOMES.—Resident Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, washing, and attendance.

BOARD OF CONTROL (MENTAL DEFICIENCY ACT, 1913).—Three Inspectors (one Female). Salaries £500, £400, and £350 per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £180 per annum, with quarters, board, laundry, and attendance.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY.—Medical Officer. Salary Rs. 500 per calendar month.

BRADFORD, BIERLEY HALL SANATORIUM FOR CONSUMPTIVES.—Resident Medical Officer. Salary £150 per annum, with board and residence.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS, Isleworth, W.—Second Assistant Medical Superintendent, &c., unmarried. Salary £150 per annum.

BRENTWOOD ASYLUM, Brentwood, Essex.—Assistant Medical Officer. Salary £200 per annum, with board, attendance, lodging, and washing.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CANCER HOSPITAL (FREE), Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Junior Assistant (Third) Medical Officer, unmarried. Salary £220 per annum, with apartments, attendance, laundry, &c.

CARDIFF CITY MENTAL HOSPITAL, Whitchurch, near Cardiff.—Second Assistant Medical Officer, unmarried. Salary £250 per annum and all found.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

CITY OF WESTMINSTER UNION INFIRMARY, Fulham-road, S.W.—Second Assistant Medical Officer. Salary £130 per annum, with board, residence, and washing.

COBHAM, SURREY, SCHIFF HOME OF RECOVERY.—Resident Surgical Officer for six months. Salary £100, with board, lodging, and washing.

CROYDON BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Assistant Resident Medical Officer. Salary £120 per annum, with board, lodging, and washing.

DAVOS-PLATZ, SWITZERLAND, QUEEN ALEXANDRA SANATORIUM.—Assistant Medical Officer. Salary £100 per annum, with board, residence, and washing.

DERBY COUNTY ASYLUM, Mickleover, Derby.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, residence, and washing.

DONCASTER ROYAL INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £100 per annum, with board, apartments, and washing.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £125 per annum, with residence, board, and laundry.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Physician for six months. Salary at rate of £75 per annum, with board, residence, and washing.

EXMINSTER, DEVON COUNTY ASYLUM.—Assistant Medical Officer. Salary £220 per annum, with quarters, board, and laundry.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn Circus, E.C.—Resident Medical Officer. Salary £100 per annum, with rooms, attendance, fire, and lighting.

GLASGOW, LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES, Shettleston, near Glasgow.—Resident Physician. Salary £170 per annum, with board, &c.

GLASGOW MATERNITY AND WOMEN'S HOSPITAL.—Out-door House Surgeon at West-End Branch.

GLOUCESTER, BARNWOOD HOUSE HOSPITAL FOR MENTAL DISEASES.—Second Assistant Medical Officer. Salary £200 per annum, with board, &c.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREENWICH, DREADNOUGHT HOSPITAL.—Medical Registrar. Salary £100 per annum, with luncheon. Also Assistant Physician.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician and House Surgeon, unmarried, for six months. Salary £30 each, with board and residence, &c. Also Surgeon Dentist.

KING EDWARD VII.'s SANATORIUM, Midhurst, Sussex.—First Assistant Medical Officer. Salary £200 per annum, with board, lodging, and attendance.

LANCASHIRE COUNTY COUNCIL.—Four Assistant Dispensary Tuberculosis Officers. Salary £350 per annum. Also Two Junior Assistant Tuberculosis Officers. Salary £300 per annum.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Physician. Salary £35 per annum, with board, residence, and laundry.

LEICESTER, LEICESTERSHIRE COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary at rate of £300 per annum.

LEICESTER ROYAL INFIRMARY.—Assistant House Surgeon and Assistant House Physician for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LIVERPOOL CITY INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with board, washing, and lodging.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Three House Surgeons and Two House Physicians for six months. Salaries at rate of £60 per annum, with residence and maintenance.

LONDON LOCK HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer to Convalescent Hospital, Cheadle, unmarried, for six months. Salary at rate of £80 per annum, with board and residence. Also Accident Room House Surgeon for six months. Salary £100 per annum, with board and residence.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Two House Surgeons. Salaries at rate of £50 per annum, with board and residence.

MIDDLESEX HOSPITAL, W.—Director of Institute of Pathology. Salary £800 per annum.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary at rate of £35 per annum, with board, residence, and laundry.

NATIONAL DENTAL HOSPITAL AND COLLEGE, Great Portland-street, W.—Deputy Anæsthetists.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Female Senior Clinical Assistants in Out-patient Department and Clinical Assistants for Ophthalmic Department.

NEWCASTLE-UPON-TYNE, ROYAL VICTORIA INFIRMARY.—Honorary Assistant Surgeon.

NEWPORT (MON.), ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary at rate of £100 per annum, with board, residence, and laundry.

NOTTINGHAM, CITY OF.—Resident Assistant Medical Officer, unmarried, for Bagthorpe Institution and Infirmary for six months. Salary at rate of £165 per annum, with apartments, &c.

PRESTON, ELSWICK SANATORIUM, near Kirkham.—Medical Superintendent. Salary £300 per annum, with board, apartments, and washing.

PRESTON ROYAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and laundry.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Pathologist and Registrar. Salary at rate of £20 per annum, and lunch.

READING, ROYAL BERKSHIRE HOSPITAL.—Honorary Assistant Physician.

ROCHESTER, ST. BARTHOLOMEW'S HOSPITAL.—Resident House Physician for six months. Salary at rate of £110 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five Appointments.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Junior Resident Medical Officer. Salary at rate of £70 per annum, with board, residence, and laundry.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary £100 per annum, with board, residence, &c. Also Junior House Surgeon. Salary £80 per annum, with board, residence, &c.

SHEFFIELD, EAST-END BRANCH OF THE CHILDREN'S HOSPITAL (Out-patient Department).—Female House Surgeon. Salary £75 per annum, with board and residence.

SINGAPORE INFECTIOUS DISEASES HOSPITAL.—Medical Superintendent. Salary 4200 dollars for the first, 4500 dollars for the second, and 4800 dollars for the third year, with furnished quarters.

SOUTHAMPTON FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

SMETHWICK COUNTY BOROUGH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

SOUTHWARK UNION INFIRMARY, East Dulwich-grove, S.E.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salary at rate of £120 per annum each, with board, lodging, and washing.

SUNDERLAND ROYAL INFIRMARY.—House Physician. Salary £120 per annum, with board, residence, and laundry.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £125 per annum, with board, washing, and attendance.

TIREE PARISH (BY OBAN).—Medical Officer. Salary £120 per annum, with house free.

TOTTENHAM EDUCATION COMMITTEE.—School Dentist. Salary at rate of £250 per annum.

WARWICK COUNTY ASYLUM, Hatton, near Warwick.—Second Assistant Medical Officer, unmarried. Salary £225 per annum, with board, lodging, and laundry.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Physician.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Physician. Salary at rate of £75 per annum, with board, residence, and washing.

WEST HAM UNION SICK HOME, Forest-lane, Forest Gate.—Second Assistant Resident Medical Officer. Salary £160 per annum.

WEST RIDING COUNTY COUNCIL EDUCATION COMMITTEE.—Eye Specialist. Salary £350 per annum.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with board, apartments, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary at rate of £125 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at Chipping Norton, in the county of Oxford; at Dinas Mawddwy, in the county of Merioneth; at Miltown Malbay, in the county of Clare; and at Wokingham, in the county of Berks.

*** The summary of vacant appointments, published weekly in this column, is, equally with other articles, the literary copyright of the Proprietors of THE LANCET.

Births, Marriages, and Deaths.

BIRTHS.

ADAMSON.—On Jan. 27th, at 33, Highcroft-terrace, Preston Park, Brighton, the wife of Oswald J. W. Adamson, M.R.C.S., L.R.C.P., of a daughter.

IREDELL.—On Feb. 7th, at Cumberland-terrace, Regent's Park, the wife of Dr. C. E. Iredell, of a daughter.

DEATHS.

COCK.—On Feb. 7th, at Ockham, Surrey, Julia Anne Hornblower Cock, M.D., in her 54th year.

WISE.—On Feb. 7th, at Ravensbourne-gardens, West Ealing, William Clunie Wise, M.D., D.P.H., Barrister-at-Law, aged 75 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

LIBERIA'S ENERVATING CLIMATE.

LIBERIA, the Negro Republic of Western Africa, occupies that part of the coast of North Guinea which is between the river Kavalli, S.E., and Manna, N.W., a distance of about 350 miles, with an area of about 41,000 square miles, and extending to latitude 8° 50', a distance of 150 miles from the seaboard. It was founded by the American Colonisation Society in 1822, and has been recognised by the United States and the European Powers since 1847 as an independent State. The population is estimated at 2,050,000, including about 10,000 Americo-Liberians. The British Consul in the Republic is Mr. R. C. F. Maugham, whose annual report has just been received at the Foreign Office. In it he remarks: "The constantly recurring attacks of malarial fever of severe type which incapacitate the European in Liberia, handicap him in his struggle against the many discouraging conditions by which he is surrounded, and, at the end of an absurdly short period of service, send him back to Europe for indispensable recruitment at the expense of time, money, and business efficiency, might be practically avoided if European settlers would only take the small amount of trouble and incur the inappreciable expense involved in mosquito-proofing their offices and dwellings. This is a vital precaution which nobody apparently, in spite of the constantly reiterated advice of the schools of tropical medicine, has as yet thought of taking. In common with all the coast lands of West Africa, Liberia abounds with mosquitoes, and the resultant fever is as common as it is disastrous. It is safe to say that throughout the country there is only one building which is proof against mosquitoes—namely, this Consulate-General—and although the result of the experiment has been striking in the extreme, it has not been further adopted, with the result that incapacity of employees and consequent dislocation of business from various forms of fever are matters of daily occurrence. The climate of a tropical country with an annual rainfall of probably more than 160 inches requires but little in the way of description. It is bound to be as bad, as enervating, and as demoralising as it can be, and when in addition the human system is sapped by the ravages of malaria, the unfortunate European is indeed in an unhappy case. The food-supply of Liberia is so bad and insufficient as to have provoked the remark of a well-known resident that 'whilst he resided in Liberia he boarded in Europe.' This is by no means an exaggeration. In Monrovia (the capital), for example, the population have to depend upon supplies brought by the fortnightly fast steamers of the Elder Dempster group of companies. At times it is possible to obtain a little more or less fresh meat from a cargo boat, but, in any case, due to want of cold storage, butcher's meat is a luxury which can only be partaken of during a very few days in each month, whilst fresh milk and butter are unknown. Cattle, sheep, and goats thrive, but no attempt is made to establish an abattoir, dairy, or cold storage meat-supply, with the inevitable result that the health of the community, which cannot be maintained in an exhausting tropical climate upon a *régime* of unpalatable tinned provisions and flavourless anæmic fowls, suffers severely."

A PASSION FOR PILLS.

IN the year 1814 one man created a record by swallowing not fewer than 51,590 pills. His name was Samuel Jessup, who died at Heckington in Lincolnshire in 1817, aged 65. He was an opulent grazier, a bachelor, without known relatives, and for the last 30 years of his life possessed a craving for what was then called "physic." In 21 years he took 226,934 pills supplied by an apothecary of the name of Wright, who resided at Bottesford. This is at the rate of 10,806 pills a year, or 29 pills each day, but towards the end he took 78 a day. Notwithstanding this he took 40,000 bottles of mixture, juleps and electuaries. Some of these particulars were disclosed at a trial for the amount of an apothecary's bill at Lincoln assizes shortly before his death.

A RAT-DESTROYING SHIP.

OUR Esperanto contemporary, *Kuracisto* (the Physician), is responsible, on the authority of Dr. William Lamb, of Hummock's Hill, S. Australia, for the statement that the U.S. Marine Hospital Service is now using at Philadelphia with remarkable success as a preventive against the introduction of bubonic plague a rat-destroying ship, the *Bratton*. The *Bratton's* apparatus was originally devised by an Australian medical man, Dr. George Harker, for extinguishing fires on board ship by exhausting all the oxygen from the ship; but the gases formed by it are destructive to life, and this fact is now being utilised by the Government officials engaged in the crusade against bubonic plague. In view of this it is stated that Philadelphia is in this respect one of the best guarded harbours in the world.

AN INK-PENCIL PEN.

Messrs. Burge, Warren, and Ridgley, Limited, of Great Saffron Hill, London, E.C., have sent us one of their "Compacto" stylo pens, which they describe as "the nattiest pocket ink-pencil ever made." Certainly the description is well merited. The "Compacto," which closes up to three inches for the pocket, will be found most useful for the taking of notes, as the ink dries at once, the flow being fine, though adequate for all ordinary purposes; and for the filling in of charts, official forms, and visiting lists, where space is usually limited, and a thick pen quite out of the question, the "Compacto" will meet the need admirably. To the medical practitioner it should especially appeal as a time-saver in professional routine. The pen can be obtained of any stationer or from the makers for 3*s*. 6*d*.

"*Haverstock.*"—Many details will be found in the Students' Number of THE LANCET of August 30th, 1913, p. 683, with regard to the regulations for the examination of candidates for admission to the Indian Medical Service. Candidates must possess, under the Medical Acts, a qualification registrable in Great Britain and Ireland. The qualification of Licentiate in Medicine and Surgery of the University of Madras is (provided that professional study was begun before Jan. 1st, 1892) registrable in the Colonial List of the British Medical Register pursuant to Section 11 of Part II. of the Medical Act, 1886 (*vide* p. xcvii. of the Medical Register, 1913). Our correspondent should also refer to the proceedings of the General Medical Council in THE LANCET of June 15th, 1912, p. 1629 *et seq.*, and the report by the examination committee on Indian Medical Study and British Qualifications. Further advice could be obtained from the Registrar, General Medical Council, 299, Oxford-street, London, W.

Etiquette.—It is not usual, even when no "introduction" can be obtained, for the newcomer to call upon the patients whose names are on the books of the practice. On the other hand, it is customary for him to call at once upon the neighbouring medical practitioners to inform them of his intention to practise. The absence of the usual introduction is a serious drawback.

Dr. A. L. Moreton.—Sir Jonathan Hutchinson's works were announced in the advertisement pages of THE LANCET of July 26th, 1913, p. 5.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced. In 1914:—

April 13th and 14th (Berlin).—Thirteenth Congress of the German Orthopædic Society.
„ 13th–16th (New York).—Fourth Congress of the International Surgical Society. (President: Prof. Depage, Bruxelles.)
„ 15th–18th (Berlin).—Forty-third Congress of the German Surgical Society.
„ 19th–21st (Berlin).—"Jubilee" Congress of the German Röntgen Society.
„ 20th–23rd (Wiesbaden).—Thirty-first German Congress for Internal Medicine.
„ 27th–May 1st (London, Royal Horticultural Hall).—Nursing Conference and Exhibition.
May 1st–Nov. 1st (Lyons).—International Town Hygiene Exhibition.
June 18th–24th (London, Church House, Westminster).—International Conference on the Blind.
July 6th–11th (Blackpool).—Twenty-ninth Congress of the Royal Sanitary Institute.
„ 8th–10th (Oxford).—Ophthalmological Congress.
„ 8th–13th (Edinburgh).—Congress of the Royal Institute of Public Health.
„ 21st–23rd (Chester).—British Pharmaceutical Conference.
„ 27th–31st (London).—Fifth Annual Session of the Clinical Congress of Surgeons of North America.
„ 28th–31st (Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.
Aug. 3rd–8th (London).—Sixth International Dental Congress.
„ 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
Sept. 7th–12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.
„ 30th–Oct. 3rd (Brussels).—Fourteenth French Congress of Medicine.
September (Vienna).—Third International Congress for Diseases of Occupation.

Nov. 15th–21st (London).—Health Week. (Under the direction of the Health Week Committee appointed by the Royal Sanitary Institute.)

(London).—Anglo-American Exhibition.

(St. Petersburg).—Third Mendeléeff Congress of Pure and Applied Chemistry and Physics.

In 1915:—

May 31st–June 5th (London, South Kensington).—Sixth International Congress of Social Work and Service.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Prof. G. E. Smith: The Brain of Primitive Man, with Special Reference to the Cranial Cast and Skull of Eoanthropus (the Piltdown Man).—Prof. A. J. Ewart: On Oxidases (communicated by Prof. J. R. Green).—Dr. J. W. W. Stephens: A New Malaria Parasite of Man (communicated by Sir Ronald Ross).—Mr. S. B. Schryver: Investigations Dealing with the Phenomena of "Clot" Formations. Part II.—The Formation of a Gel from Cholate Solutions having Many Properties Analogous to those of Cell Membranes (communicated by Prof. V. H. Blackman).—Mr. D. J. Lloyd: The Influence of the Position of the Cut upon Regeneration in Gunda Ulvae (communicated by Prof. J. S. Gardiner).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MONDAY.

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—J. Herbert Parsons, Leslie Paton): at 8.30 P.M.

Adjourned Discussion:

On the Use of Salvarsan in Ophthalmic Practice (to be re-opened by Lieut.-Col. R. H. Elliot, I.M.S.).

TUESDAY.

SECTION OF THERAPEUTICS AND PHARMACOLOGY (Hon. Secretaries: W. Langdon Brown, Philip Hamill): at 4.30 P.M.

Laboratory Meeting at the Pharmacological Laboratory, University College (Prof. Cushny).

Members desirous of giving demonstrations are requested to communicate with Prof. Cushny, or one of the Hon. Secretaries.

GENERAL MEETING OF FELLOWS at 5 P.M.

Ballot for Candidates for Fellowship.

SECTION OF PATHOLOGY (Hon. Secretaries—Gordon W. Goodhart, C. Price-Jones): at 8.30 P.M.

Mr. Rupert Farrant: The Pathological Changes of the Thyroid in Disease.

Dr. F. H. Thiele: Paths of Spread in Bacterial Infection.

Mr. A. C. Morson: The Changes which Occur in Malignant Tumours on Exposure to the Gamma Rays of Radium.

THURSDAY.

SECTION OF DERMATOLOGY (Hon. Secretaries—J. M. H. MacLeod, S. E. Dore): at 4.30 P.M.

Dr. H. G. Adamson: (1) A Family Group of Cases of Multiple Benign Epithelioma; (2) Lentigenous Eruption in an Adult.

Dr. Freeman: Case of Bromide Eruption.

Dr. Nixon: (1) Case for Diagnosis; (2) Case of Acanthosis Nigricans.

Dr. Pernet: Case of Rodent Ulcer.

Dr. Norman Meachen: Two Cases of Congenital Mole.

Dr. J. M. H. MacLeod: Case of Grouped Comedones in a Young Child.

Dr. Russell Wilkinson: Case of Dermatitis Herpetiformis.

Dr. Knowsley Sibley: Case for Diagnosis.

Dr. Corbett: Case of Lichen Planus Verrucosus.

SPECIAL MEETING: at 8.30 P.M.

Debate on Pityriasis Rosea (to be opened by Dr. Graham Little).

FRIDAY.

SECTION OF OTOLOGY (Hon. Secretaries—G. J. Jenkins, W. M. Mollison): at 5 P.M.

Cases and Specimens:

Will be shown by Dr. Dundas Grant, Dr. W. H. Kelson, Mr. C. Ernest West, Mr. Richard Lake, Mr. G. J. Jenkins, and Mr. W. M. Mollison.

SECTION OF ELECTRO-THERAPEUTICS (Hon. Secretaries—Cecil R. C. Lyster, S. Gilbert Scott): at 8.30 P.M.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY.—4.30 P.M., Demonstration of Pathological Specimens. Cases sent for Consultation. 5.15 P.M., Discussion on Bullous Eruptions (opened by Dr. M. Dockrell).

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., Mr. W. McAdam Eccles: The Medico-Legal Aspects of Hernia.

CHELSEA CLINICAL SOCIETY, Club Rooms of the Medical School, St. George's Hospital, S.W.

TUESDAY.—8.30 P.M., Paper:—Dr. M. Wright: The Psychology of Freud and its Relation to the Psychoneuroses. Followed by a discussion.

PLYMOUTH MEDICAL SOCIETY, Athenæum Chambers, Athenæum-lane, Plymouth.

WEDNESDAY.—8.30 P.M., Discussion on Hysteria (opened Dr. P. R. Bolus).

CHILD STUDY SOCIETY, LONDON, Royal Sanitary Institute, 90, Buckingham Palace-road, S.W.

THURSDAY.—7.30 P.M., Mr. E. W. Scripture (New York): Speech Defects of Children and their Treatment.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—8.30 P.M., Paper:—Fleet-Surgeon P. W. Bassett-Smith, C.B., R.N.: Recent Research Relating to Undulant or Mediterranean Fever. (Specimens illustrating Barton's Bodies and the Other Blood Changes in Oroya Fever will be shown.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

THURSDAY.—5 P.M., Milroy Lecture:—Dr. F. Shufflebotham: The Hygienic Aspect of the Coal Mining Industry in the United Kingdom. (Lecture I.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY, WEDNESDAY, AND FRIDAY.—5 P.M., Hunterian Lectures:—Prof. A. Keith: Evolution and Diseases of the Anthropoid Apes: Lecture I., Living Forms of Anthropoids: their Distribution and Chief Characters; Lecture II., The Growth and Form of Brain in Anthropoid Apes; Lecture III., A Comparison of the Periods of Development, Growth, and Life amongst the Various Forms of Apes. (Illustrated by specimens from the Museum of the College; the epidiascope will also be used.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. H. Davis: Clinique (Skin). 5.15 P.M., Lecture:—Mr. W. Trotter: Common Errors in Diagnosis—Sprains and Fractures.

TUESDAY.—4 P.M., Dr. G. Rankin: Clinique (Medical). 5.15 P.M., Lecture:—Sir John Bland-Sutton: Common Errors in Diagnosis—Abdomen.

WEDNESDAY.—4 P.M., Mr. O. L. Addison: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. D. Sommerville: Common Errors in Diagnosis—Foods and Feeding.

THURSDAY.—4 P.M., Dr. T. G. Stewart: Clinique (Medical). 5.15 P.M., Lecture:—Dr. E. Pritchard: Common Errors in Diagnosis—Infant Feeding.

FRIDAY.—4 P.M., Mr. C. E. West: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Dr. Owen: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Pardoe: Genito-urinary Surgery.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pardoe: Genito-urinary Surgery.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Pardoe: Genito-urinary Surgery.

THURSDAY.—9 A.M., Dr Bernstein: Bacterial Therapy Department. 10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12 noon, Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Souttar: Diseases of the Testicles.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin. 5 P.M., Lecture:—Mr. Souttar: Diseases of the Testicles.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). X Rays and Electrical Methods. 3 P.M., Special Demonstration: Paralysis of the Vocal Cords (Mr. Gillies). Medical In-patient (Dr. A. J. Whiting). 4.15 P.M., Lecture:—Dr. A. J. Whiting: The Treatment of Auricular Fibrillation.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson); X Rays and Electrical Methods (Dr. Metcalfe).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), Clinical Theatre, London Hospital, Mile End-road, E.

Course of Lectures on the Neuroses and Psychoses of Children:—

MONDAY.—4.15 P.M., Dr. F. Warner: Elements of Brain Training.

THE THROAT HOSPITAL, Golden-square, W.
MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.
TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. S. Scott: Labyrinthine Forced Movements.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. S. Scott: Labyrinthine Nystagmus.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.
WEDNESDAY.—4 P.M., Lecture: Dr. J. L. Bunch: Some Skin Diseases in Children.

CANCER HOSPITAL, Museum of the Hospital, Brompton, S.W.
Post-Graduate Lectures on the Diagnosis and Treatment of Cancer:—
WEDNESDAY.—5 P.M., Dr. Horder: The Value of Combined Treatments in Cases of Inoperable Cancer.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.
TUESDAY.—2 P.M., Dr. W. Griffith: Pathology of the Skin Appendages.
THURSDAY.—6 P.M., Dr. M. Dockrell: Seborrhœa and Psoriasis dealt with as Stages of the Same Dermatitis in Symptoms, Diagnosis, and Treatment.

ROYAL INSTITUTE OF PUBLIC HEALTH, Lecture Room of the Institute, 37, Russell-square, W.C.
Course of Instruction for Tuberculosis Officers, School Medical Officers Medical Practitioners, &c.:—
FRIDAY.—5 P.M., The Diagnosis and Treatment of Tuberculosis, &c.—Lecture VI.:—Mr. H. J. Gauvain: Surgical Tuberculosis.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.
TUESDAY.—3 P.M., Prof. W. Bateson: Animals and Plants under Domestication. (Lecture V.)
FRIDAY.—9 P.M., Prof. A. Keith: Busts and Portraits of Shakespeare and of Burns: An Anthropological Study.

MANCHESTER HOSPITALS POST-GRADUATE CLINIC.
MONDAY.—MANCHESTER CHILDREN'S HOSPITAL, Gartside-street.—4.30 P.M., Mr. W. H. Hey: Surgical Cases in Children.
TUESDAY.—SALFORD ROYAL HOSPITAL—4.30 P.M., Mr. J. P. Buckley: Hernia.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Demonstration of Medical and Surgical Cases.
THURSDAY.—ANCOATS HOSPITAL—4.30 P.M., Dr. A. Renshaw: Information derived from Blood Counts.
FRIDAY.—ROYAL EYE HOSPITAL—4.30 P.M., Dr. H. H. McTabb: Choroiditis.

ROTUNDA HOSPITAL POST-GRADUATE COURSES, Dublin.
MONDAY.—10 A.M., Obstetrical Lecture: Rupture of the Uterus. (continued). 11 A.M. Examination of Patients and Minor Operations.
TUESDAY.—10 A.M., Major Operations.
WEDNESDAY.—10 A.M., Obstetrical Lecture: The Varieties of Contracted Pelvis. 11 A.M., Examination of Patients and Minor Operations.
THURSDAY.—10 A.M., Major Operations.
FRIDAY.—10 A.M., Gynæcological Lecture: Special Lecture in Gynæcological Pathology. 11 A.M., Examination of Patients and Minor Operations.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1913 were given in THE LANCET of Dec. 27th, 1913.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1913 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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TO COLONIAL AND FOREIGN SUBSCRIBERS.

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SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 11th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 5	30·13	S.	...	82	54	43	43	44	Fine
,, 6	29·96	S.	...	78	52	42	42	43	Fine
,, 7	29·75	S.W.	0·10	85	52	43	45	47	Cloudy
,, 8	29·49	S.W.	0·12	51	50	46	45	46	Raining
,, 9	29·79	S.	0·31	76	54	46	48	48	Overcast
,, 10	29·86	S.	...	80	55	47	46	47	Fine
,, 11	29·72	S.	0·02	51	47	47	45	47	Raining

The following journals, magazines, &c., have been received:—Veterinary Journal, School Hygiene, Die Therapie der Gegenwart, Man, Bulletins et Memoires de la Société de Radiologie Médicale de France, Public Health, Parasitology, Archives Générales de Médecine, Archiv für Schiffs- und Tropen-Hygiene, British Journal of Children's Diseases, Royal London Ophthalmic Hospital Reports, Annali di Medicina Navale e Coloniale, Indian Medical Record, Journal of Mental Science, Archives de l'Institut Pasteur de Tunis, Middlesex Hospital Journal, Medical Review, Revue de Gynécologie, South African Nursing Record, South African Medical Record, Child, Journal of Tropical Medicine and Hygiene.

Communications, Letters, &c., have been received from—

A.—Mr. E. Arnold, Lond.; All Saints' Hospital, Lond., Secretary of; Mr. J. Astier, Paris; Dr. Herbert Armstrong, Liverpool; Dr. H. G. Adamson, Lond.; Dr. John Aulde, Philadelphia; Dr. Donald B. Armstrong, New York; Mr. Joseph A. Adolph, Lond.

B.—Messrs. Butterworth and Co., Lond.; Bombay Medical Union, Secretary of; Mr. D. H. Baria, Dhrangadra, India; Messrs. R. and J. Beck, Lond.; Birkenhead Borough Hospital, Matron of; *Blackburn Times*, Manager of; Blackburn Union, Clerk to the; Messrs. W. H. Bailey and Son, Lond.; Bollerine, Ltd., Lond.; Birmingham Education Committee, Secretary of; Board of Education, Lond., Secretary of; Dr. S. Henning Belfrage, Lond.; Mr. George Bethell, Lond.; Dr. F. Bachmann Wiesbaden; Brentwood Asylum, Medical Superintendent of; British Oto-Laryngological Society, Lond., Hon. Secretary of; Mr. W. H. Brown, Lond.

C.—Mr. C. J. B. Cooke, Crewe; Cumberland County Council, Carlisle, Chief Medical Officer of; Messrs. Crossley and Co., Lond.; Dr. F. R. Cosgrave, Burton; County Asylum, Chester, Clerk to the; Messrs. Constable and Co., Lond.; Miss D. S. Campbell, Sidmouth; Child-Study Society, Lond., Hon. Secretary of; Mr. H. Colibran, Lond.; Dr. H. Clément, Oxford; Dr. Foveau de Courmelles, Paris; Dr. Martin Cusack, Lond.; Dr. R. Crawfurd, Granada; Dr. F. McLean Campbell, Oakland; Mr. W. P. Capes, New York.

D.—Messrs. Down Bros., Lond.; Davis Gas Stove Co., Lond.; Messrs. F. Diemer and Co., Cairo; Messrs. Duncan, Flockhart, and Co., Edinburgh; Doncaster Royal Infirmary, Hon. Secretary of; Messrs. S. Deacon and Co., Lond.; Derby County Asylum, Mickleover, Clerk to the; Dr. J. H. Drysdale, Lond.; Mr. A. J. D'Souza, Lond.; Dr. E. W. Dewey, Portsmouth.

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